FIG. 1A

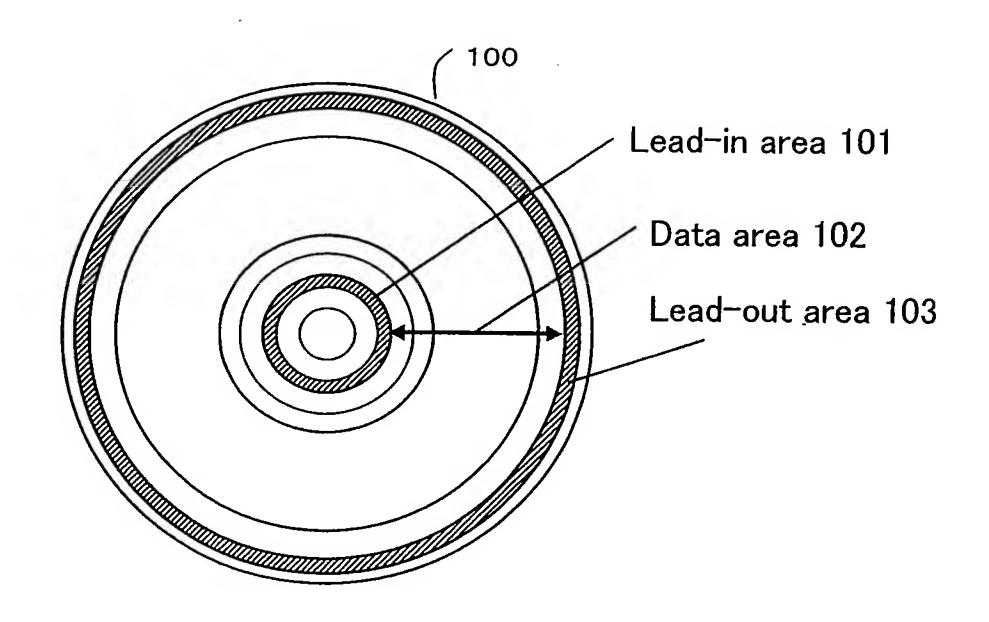


FIG. 1B

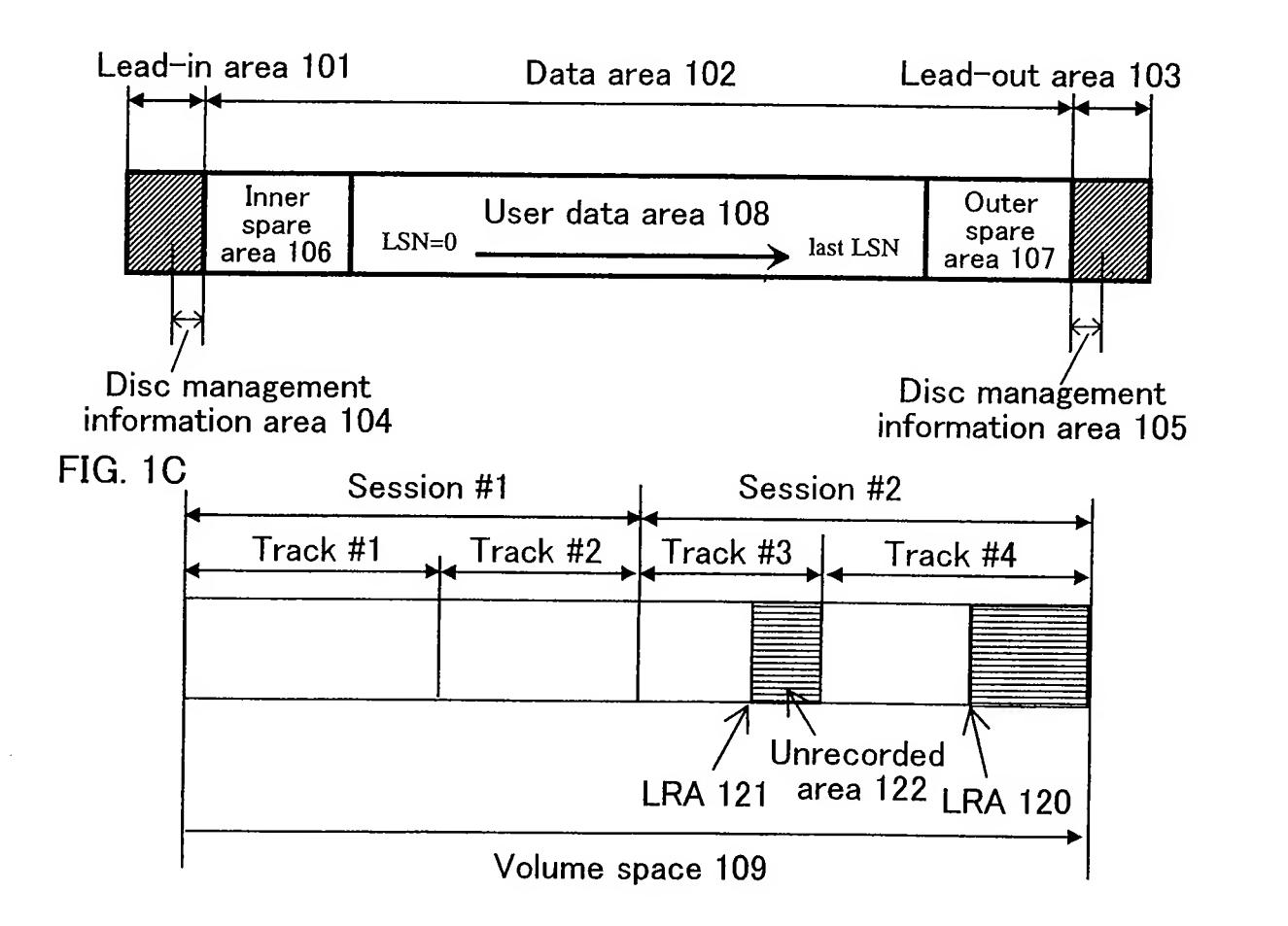


FIG. 2A
Session management information 200

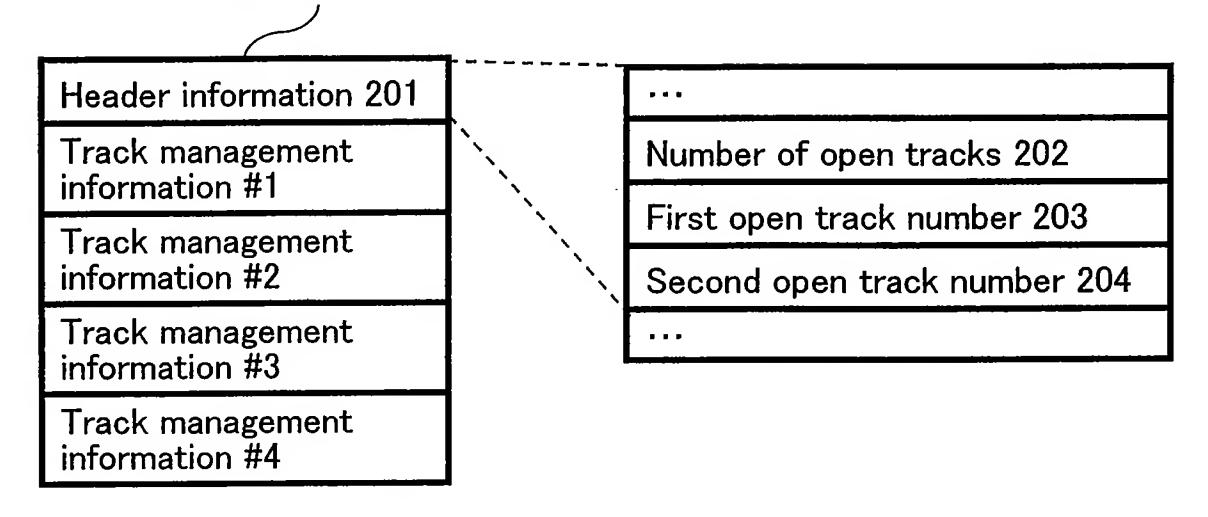


FIG. 2B

Track management information 210

Session start Information 211 Information 212	Last recorded address information within track (LRA) 213
---	--

FIG. 2C
Space bitmap management information 220

Header information 221

Managed area information 222

Space bitmap information 223

FIG.3

Disc structure information 1100

FIG.4 100b

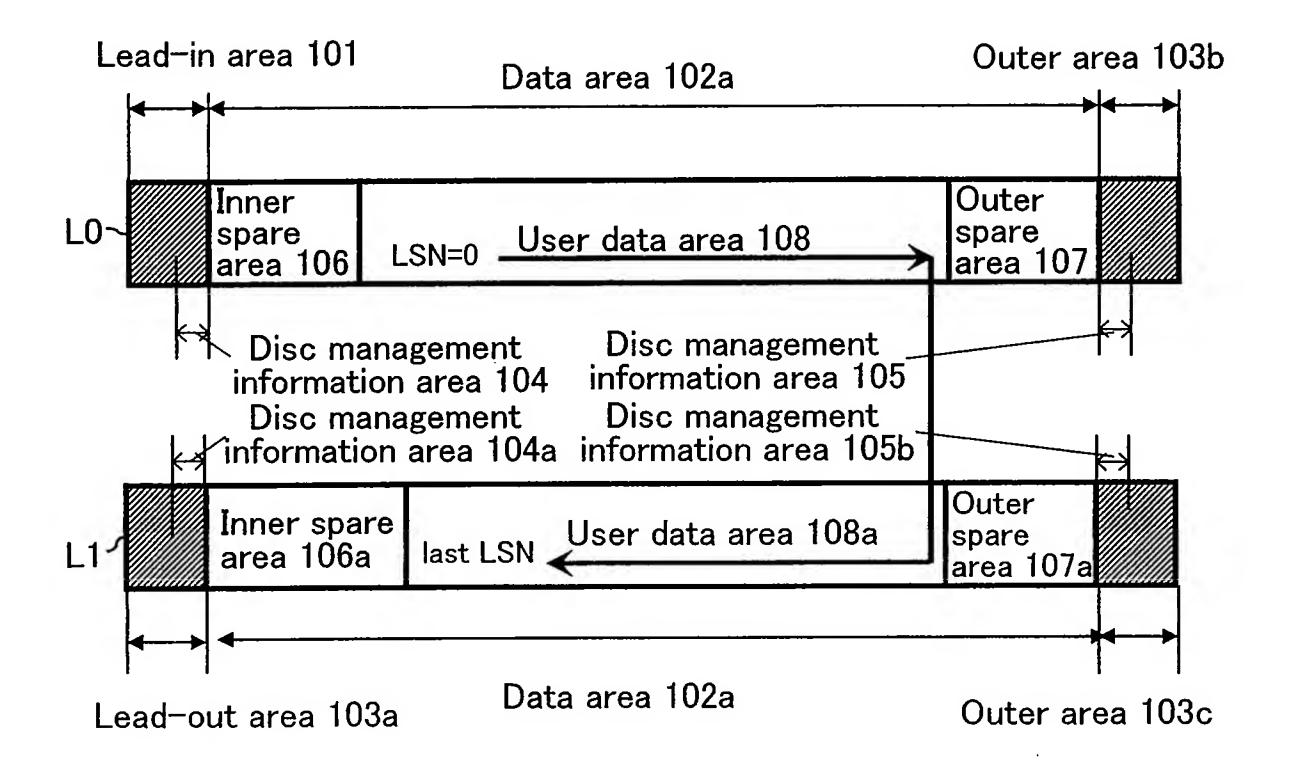


FIG.5A

Replacement management information list 1000

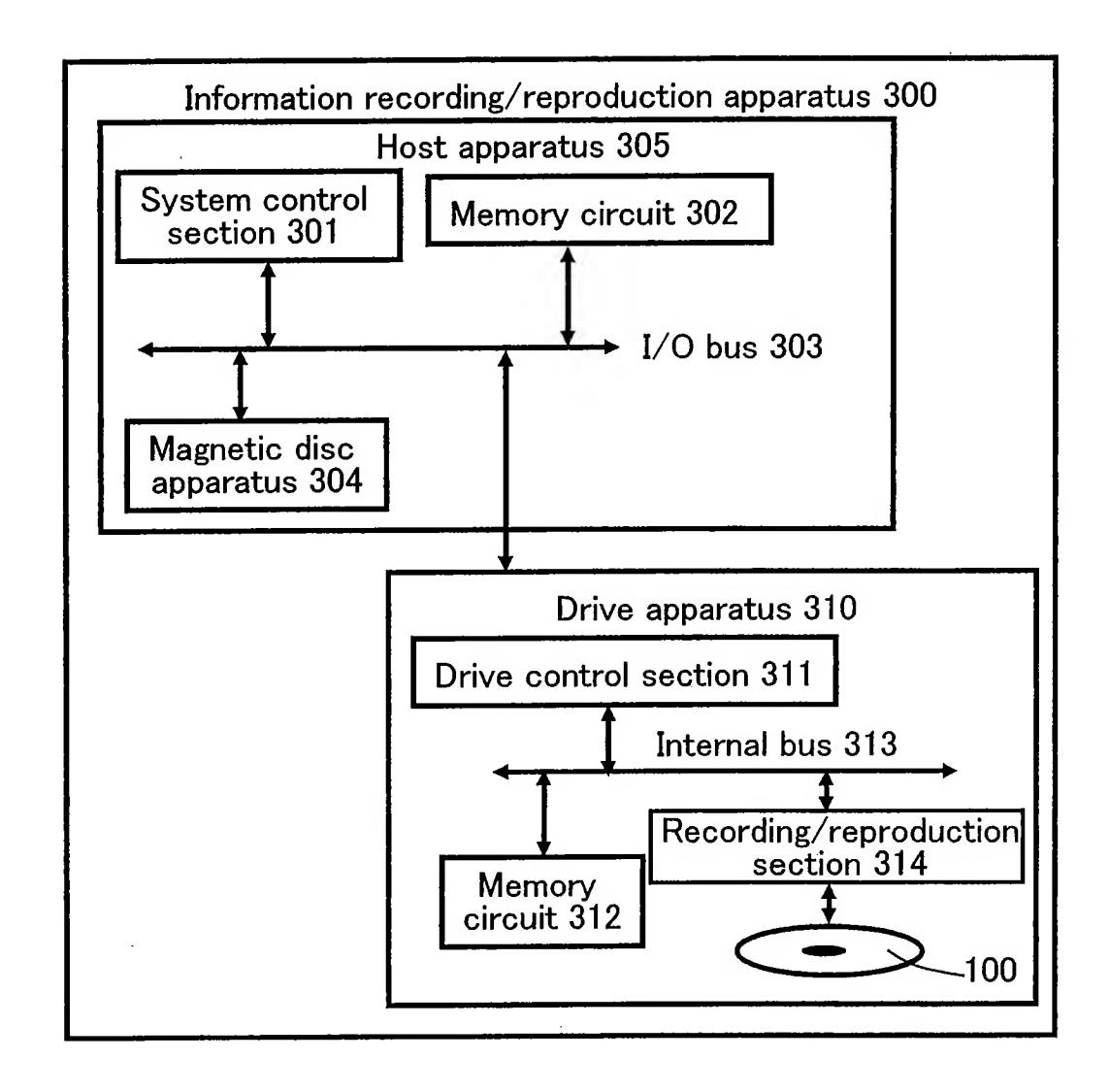
Header information 1001
Replacement management information #1
Replacement management information #2
Replacement management information #3
Terminator information
00h

FIG.5B

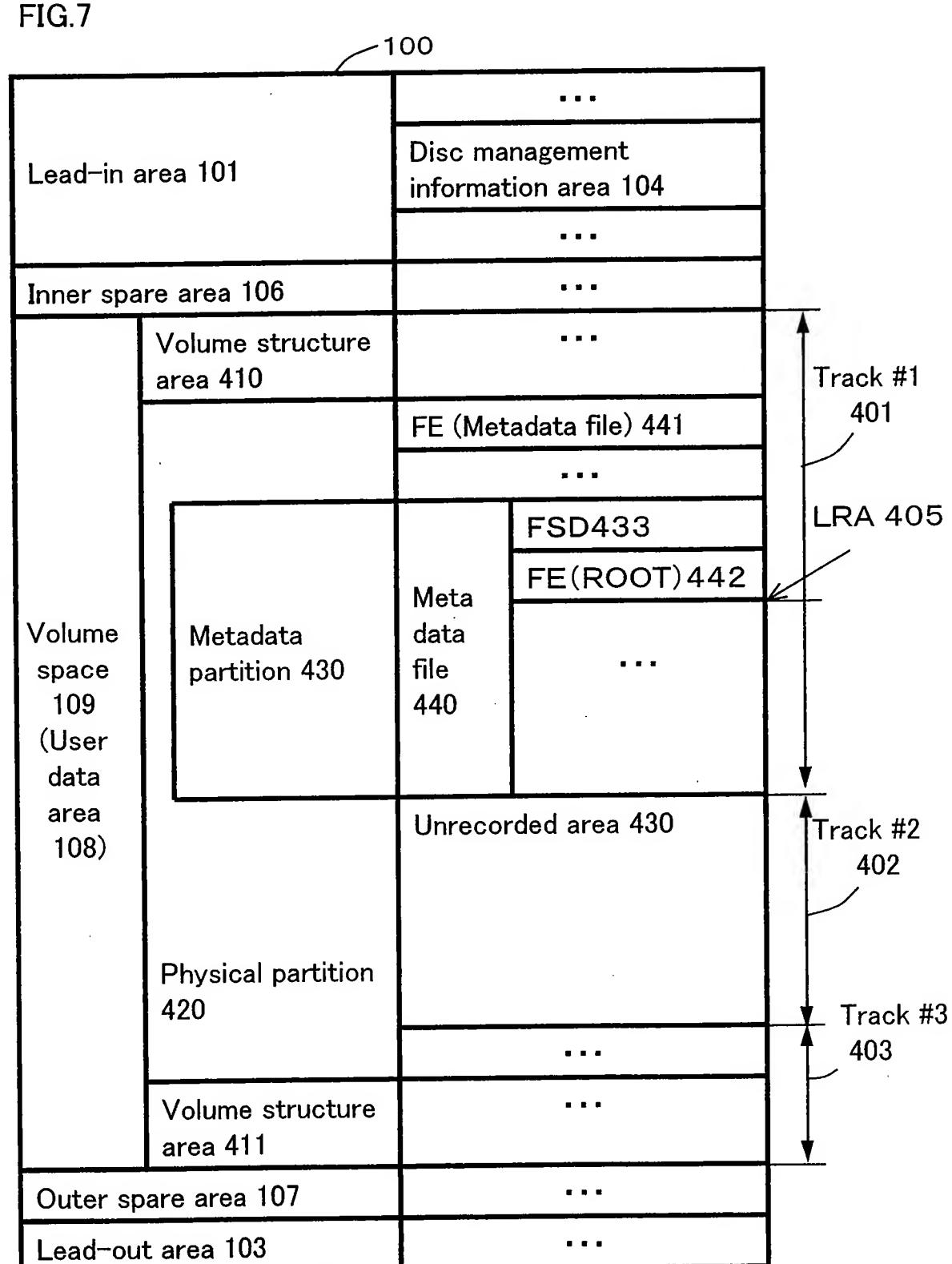
Replacement management information 1010

Status information	Original location	Replacement location
1011	information 1012	information 1013

FIG.6







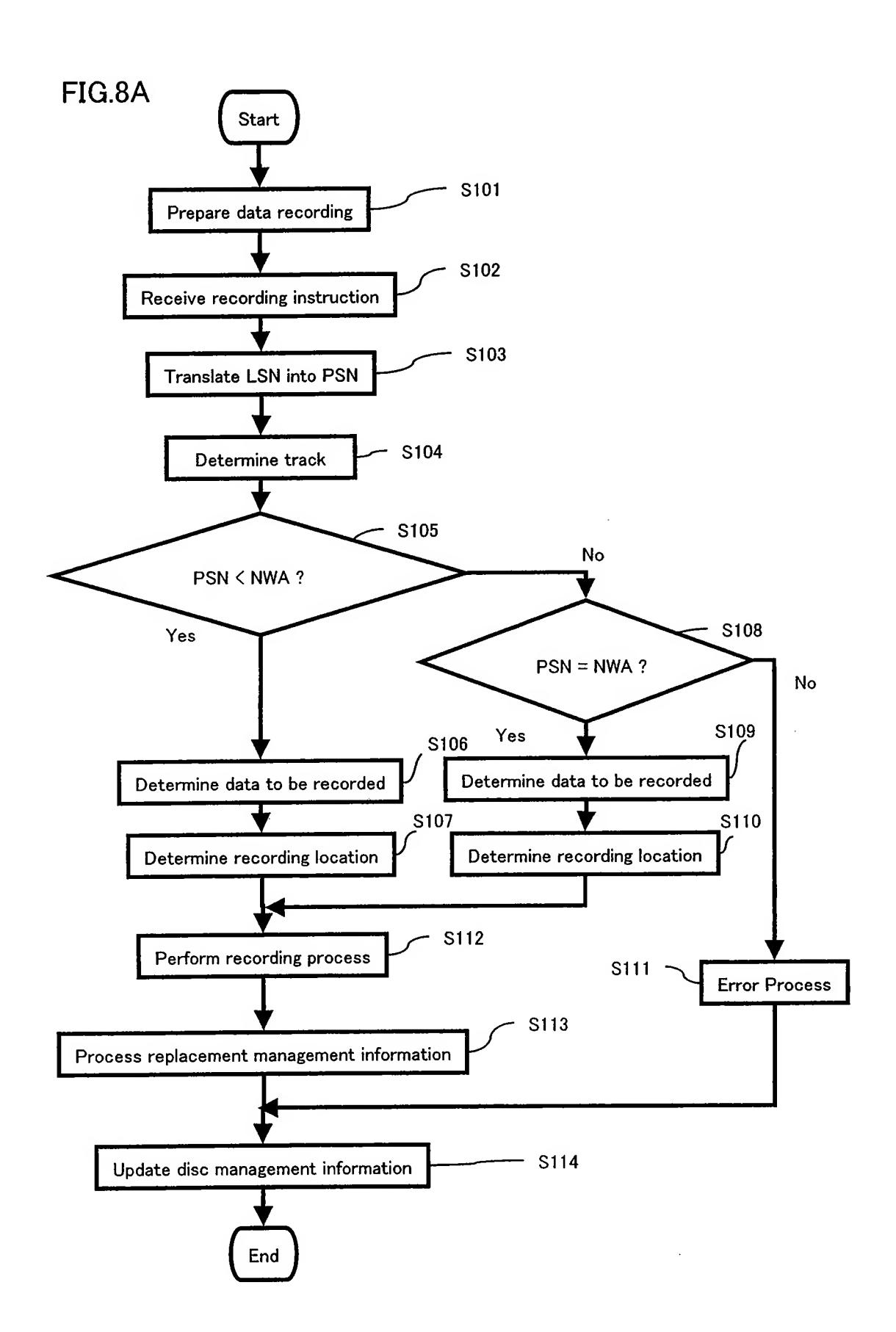
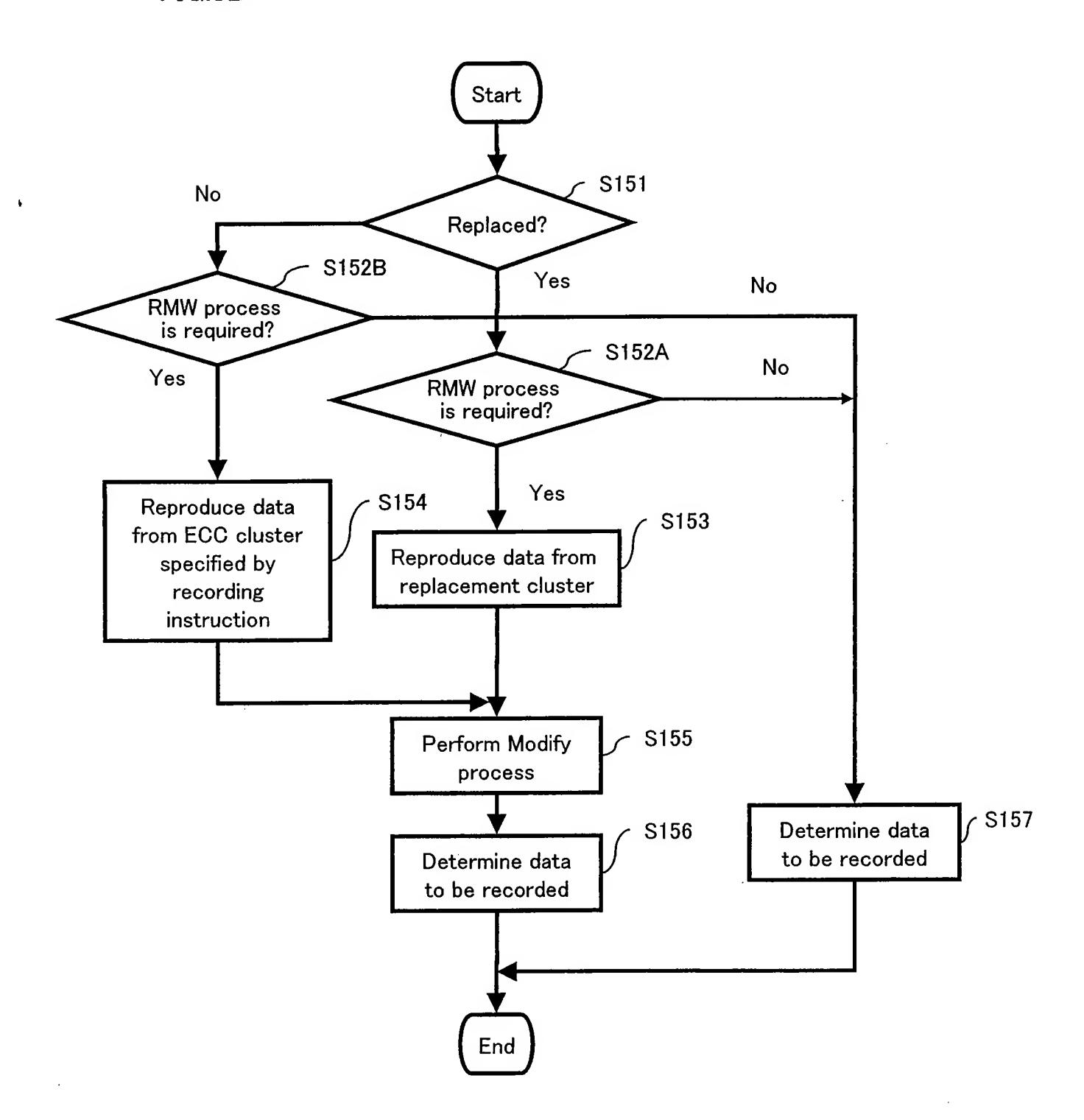
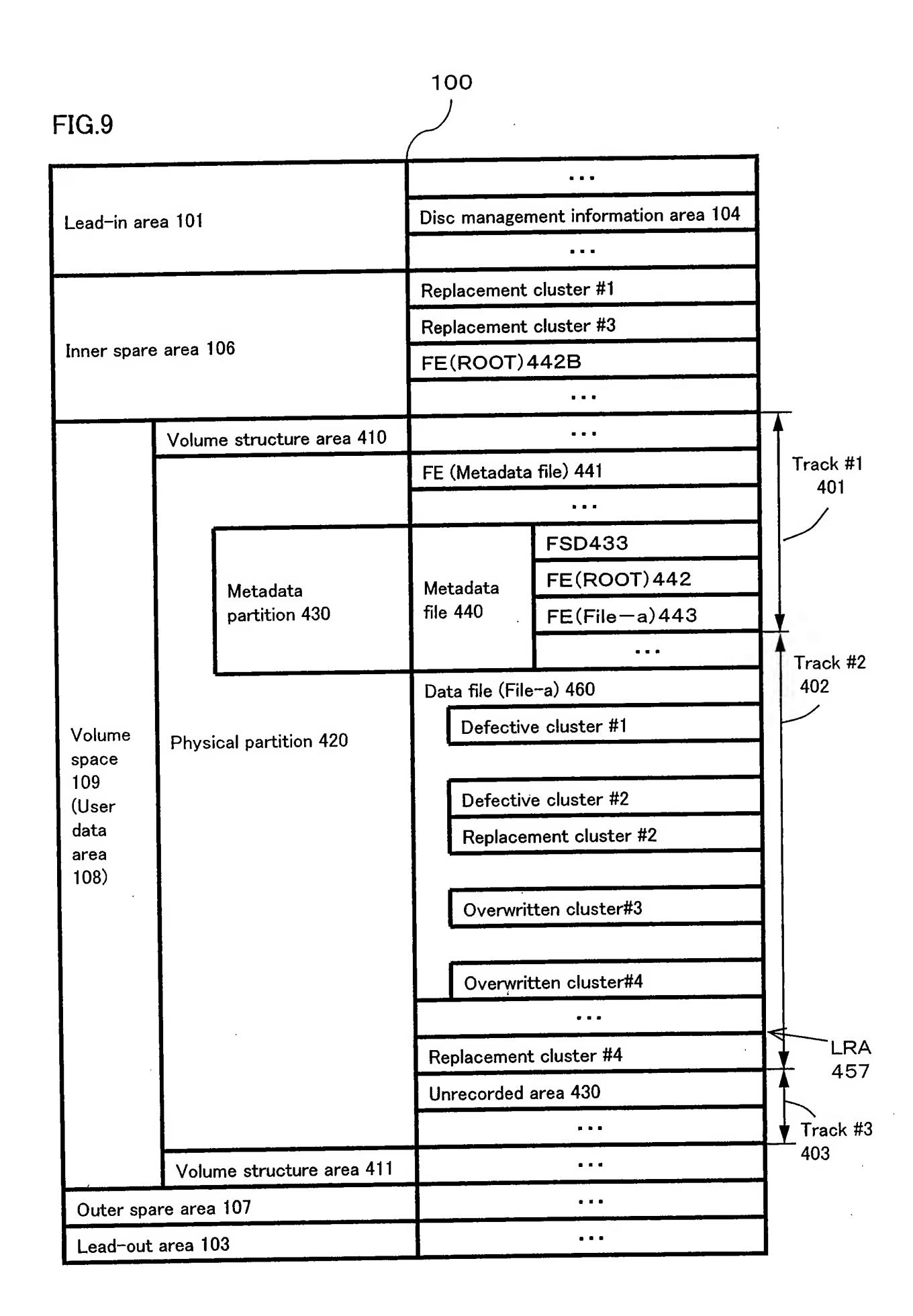


FIG.8B





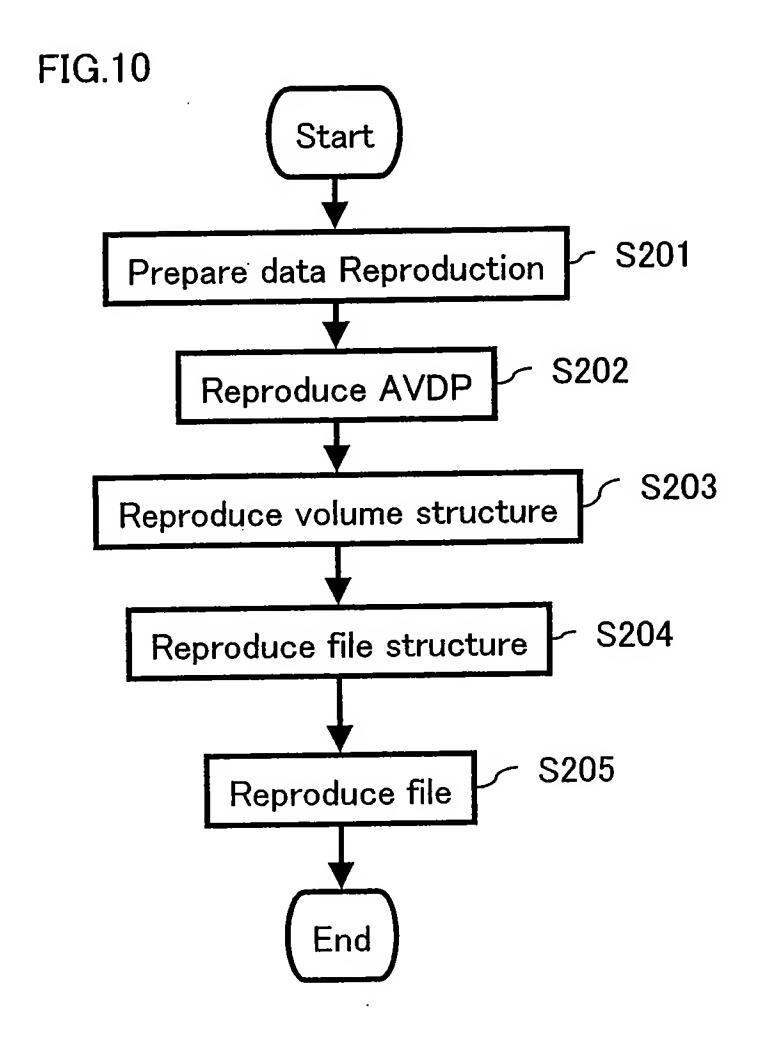


FIG.11 Replacement management information 1010B

Statu	s informa 1011	ation	Original location information 1012	Replacement location	Туре
Flag1	Flag2	Flag3	intormation forz	information 1013	
0	0	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in Spare area)	(1)
0	0	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in Spare area)	(2)
0	0	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in Spare area)	(3)
0	1	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in User data area)	(4)
	1	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in User data area)	(5)
0	1	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in User data area)	(6)
1	0	00	Defective cluster location information		(7)

Flag1

For replacement: 0 For defect: 1

Flag2

Replace in Spare area or no replacement cluster: 0 Replace in User data area: 1

Flag3

Single cluster : 00 Contiguous clusters (start location) : 01 Contiguous clusters (end location) : 10

FIG. 12 Physical address space PSN Data 100-131 (Unrecorded) **ECC Cluster** 132-163 (Unrecorded) (Unrecorded) 164-195 Logical address space (Unrecorded) 196-227 Inner spare ↑ area 106 LSN Data 1100-1131 (Unrecorded) 0 - 31(Unrecorded) area 108 1132-1163 32-63 (Unrecorded) (Unrecorded) 1164-1195 64-95 (Unrecorded) (Unrecorded) **LRA 500** 1196-1227 96-127 (Unrecorded) (Unrecorded) Track #1 128-159 (Unrecorded) 1228-1259 (Unrecorded) 1260-1291 (Unrecorded) 160-191 (Unrecorded) 1292-1323 (Unrecorded) (Unrecorded) 192-223 1324-1355 (Unrecorded) (Unrecorded) 224-255 (Unrecorded) 1336-1382 (Unrecorded) 256-287 - - -- - -

FIG. 13A

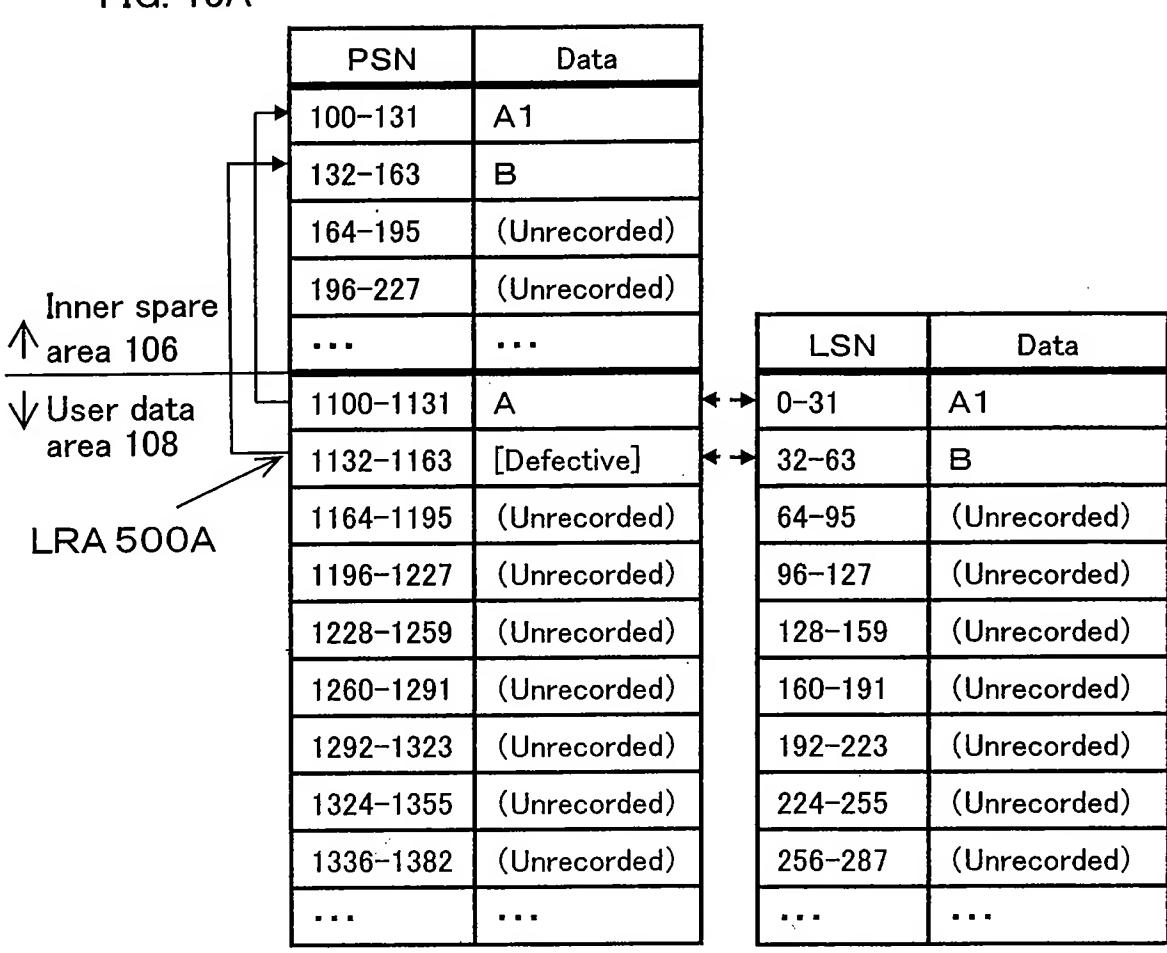
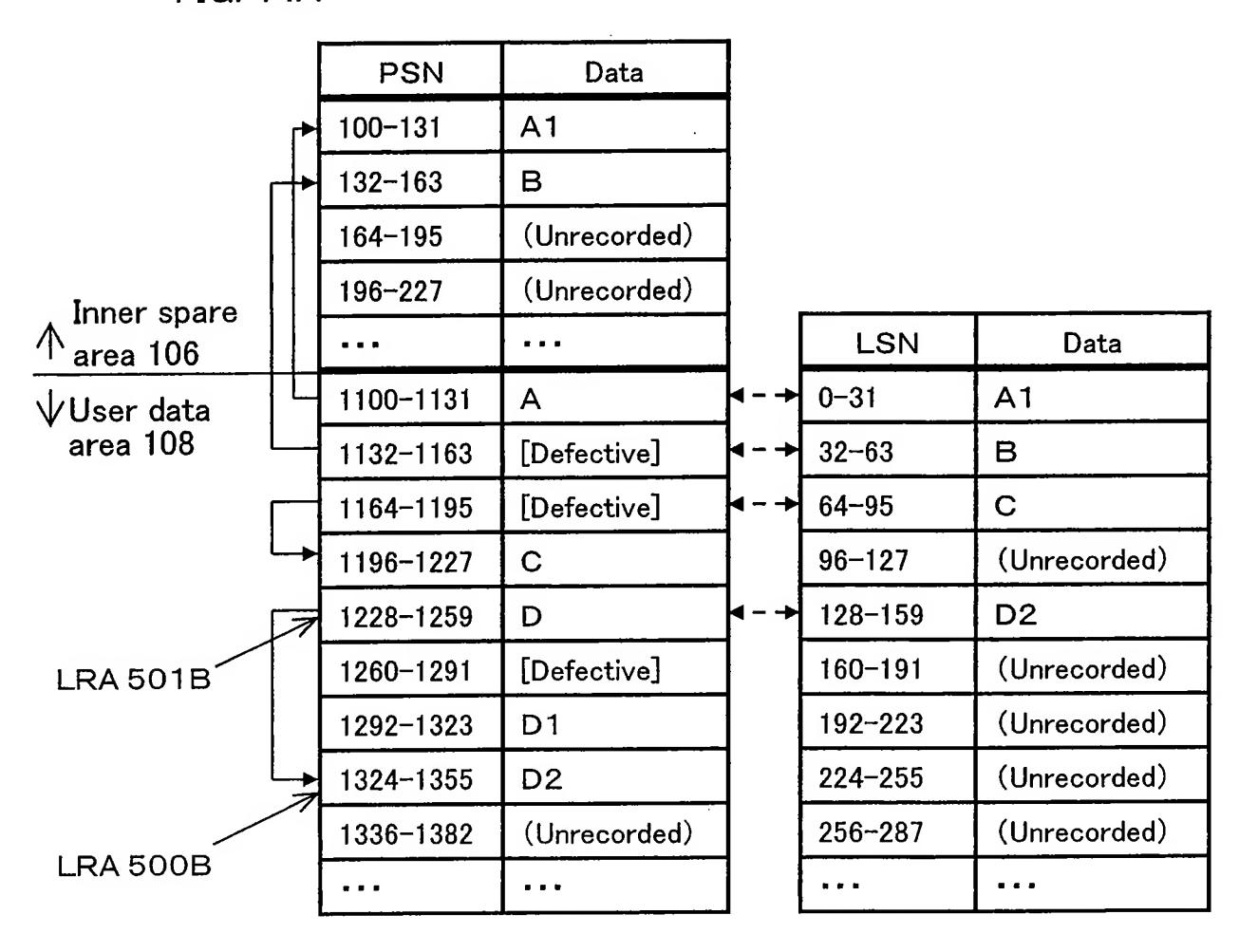


FIG. 13B				1000A ر		_
	Sta info	itus ormat	ion	Original location	Replacement location	
	0	0	00	1100	100	511
	0	0	00	1132	132	512

FIG. 14A



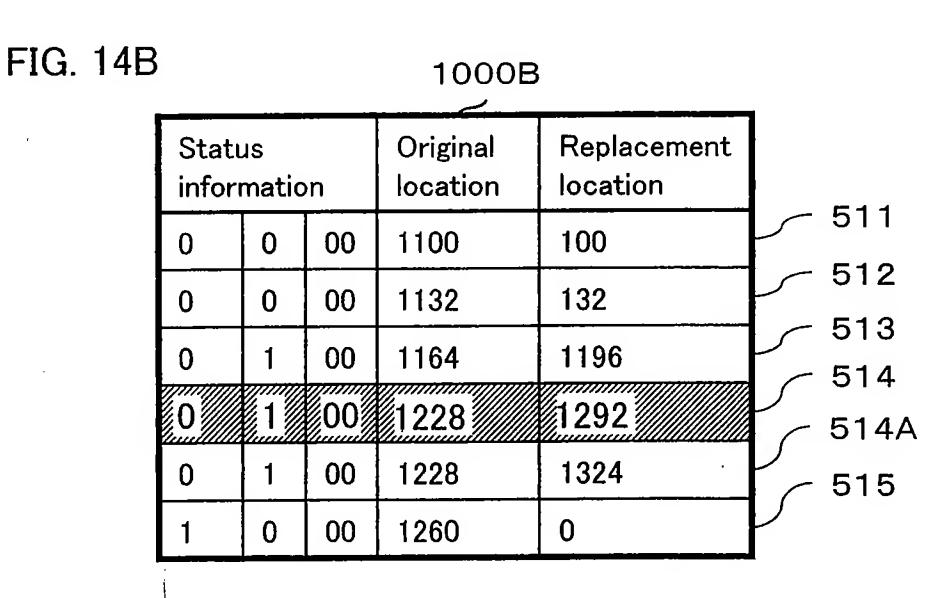


FIG. 15A

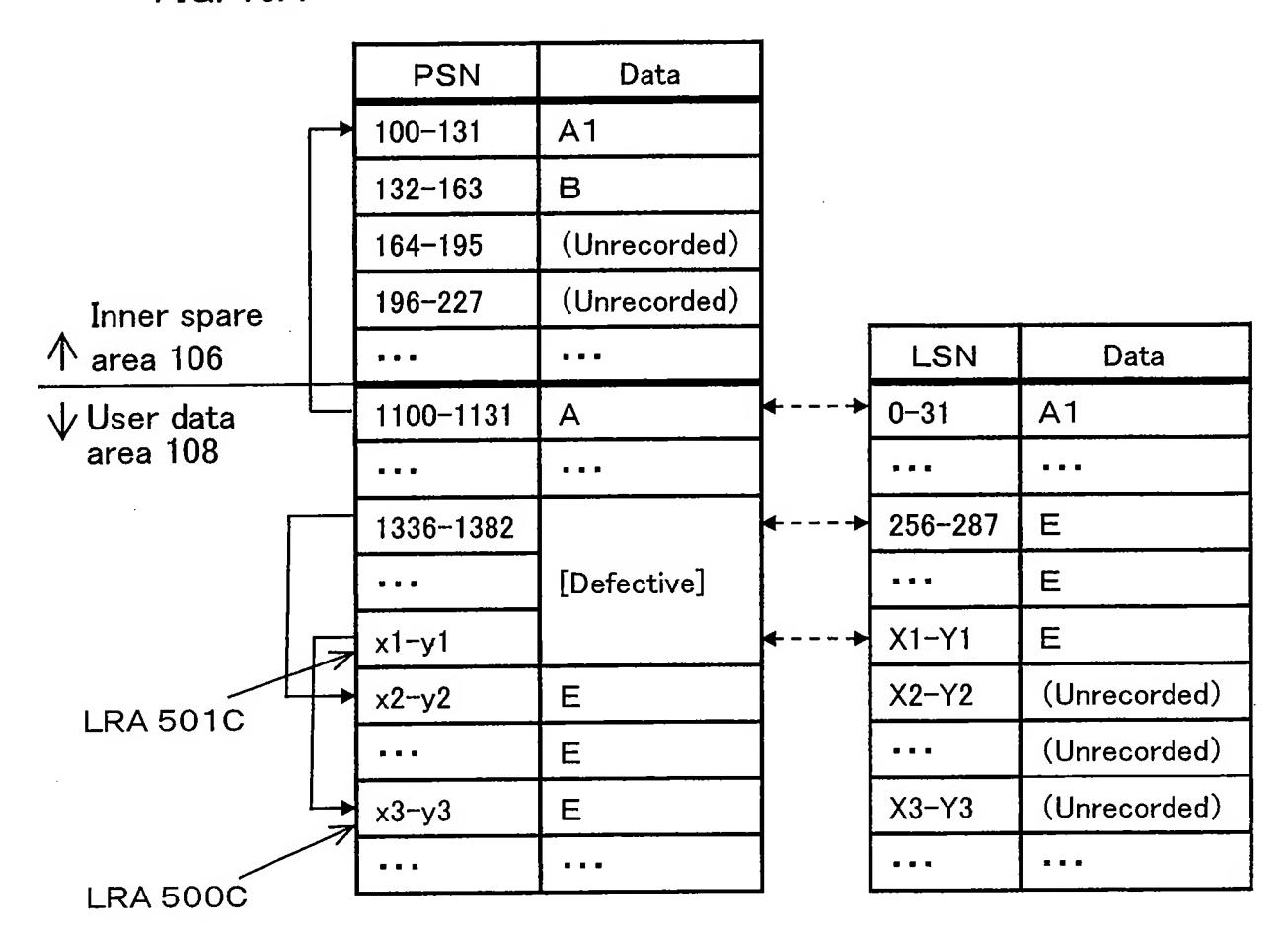
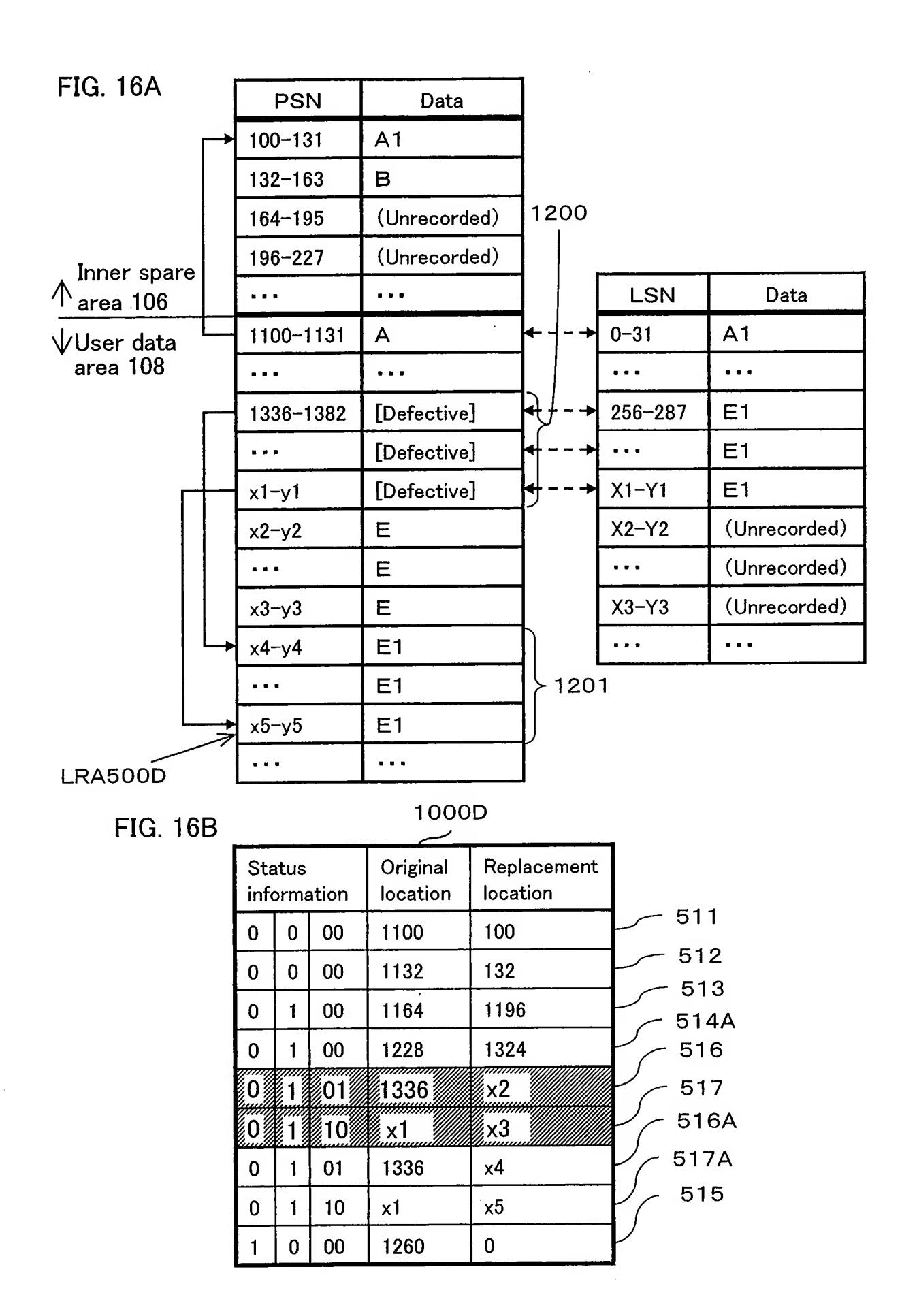
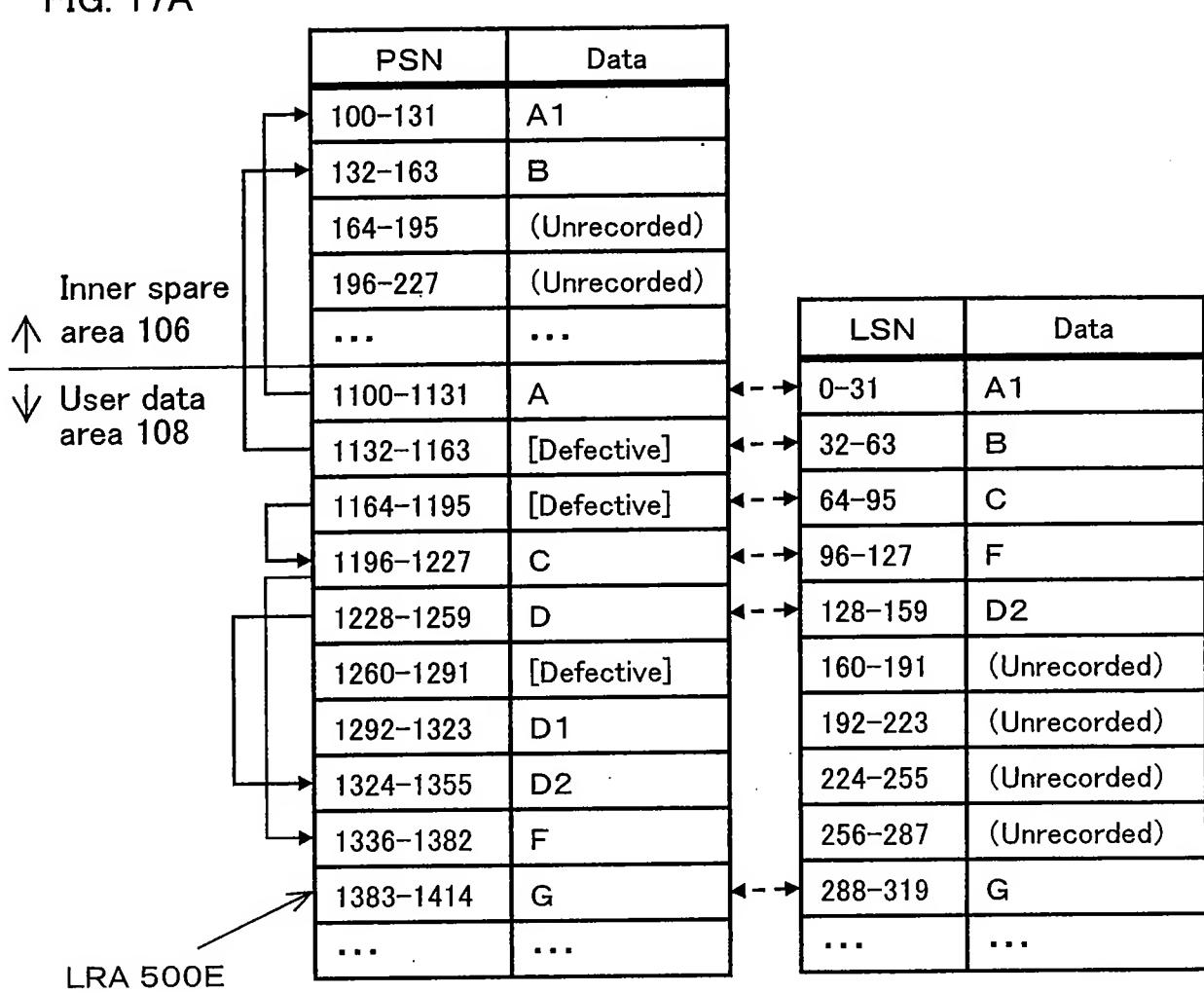


FIG. 15B 1000C Replacement Original Status location location information 514A **x2 x3 x**1





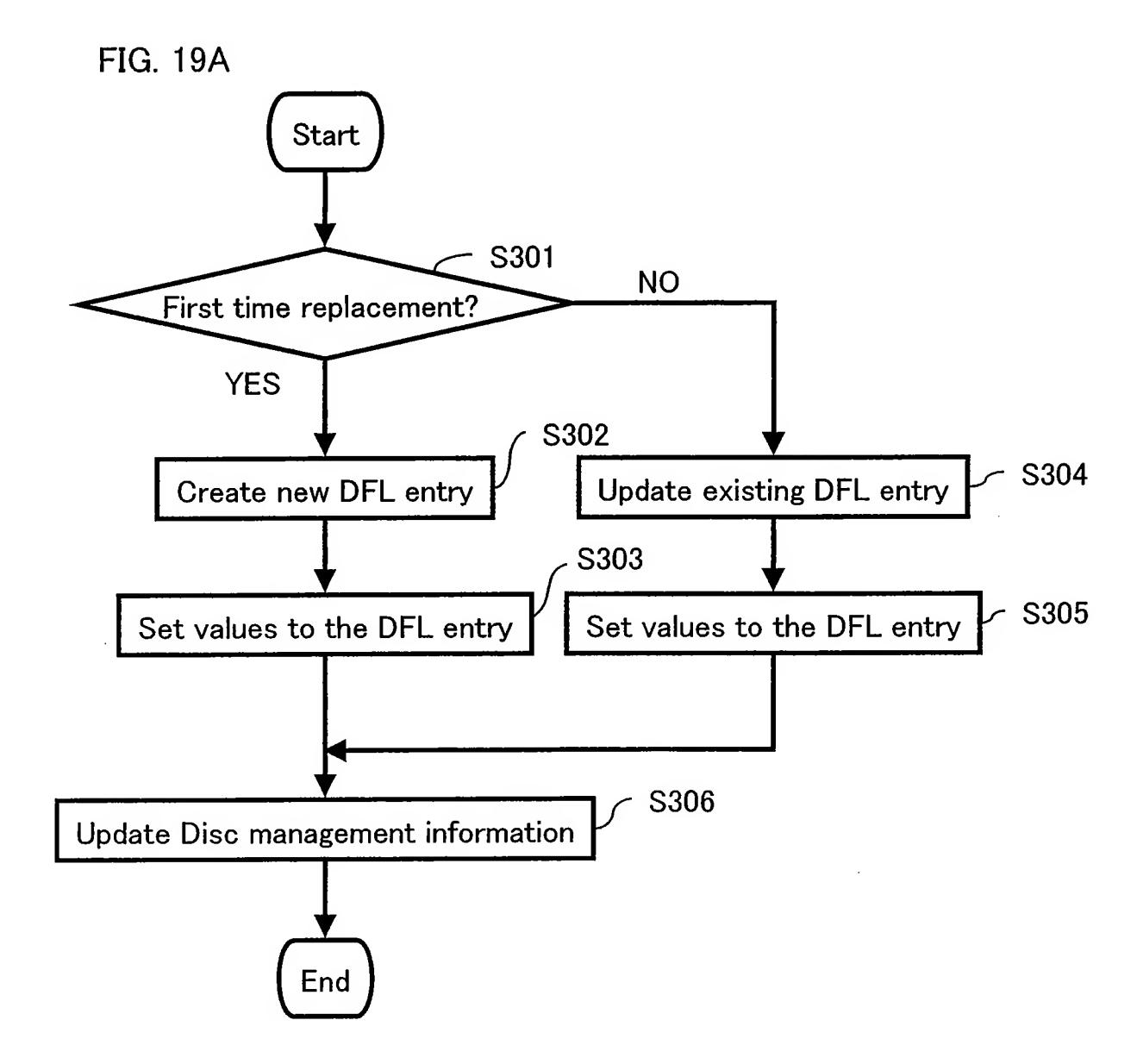


1000E FIG. 17B Original Replace Status information ment location location 514A

FIG. 18

DFL entry 2010

Statu	s 1	Defective cluster	Status 2	Replacement cluster
2011	Α	first PSN 2012	2011B	first PSN 2013



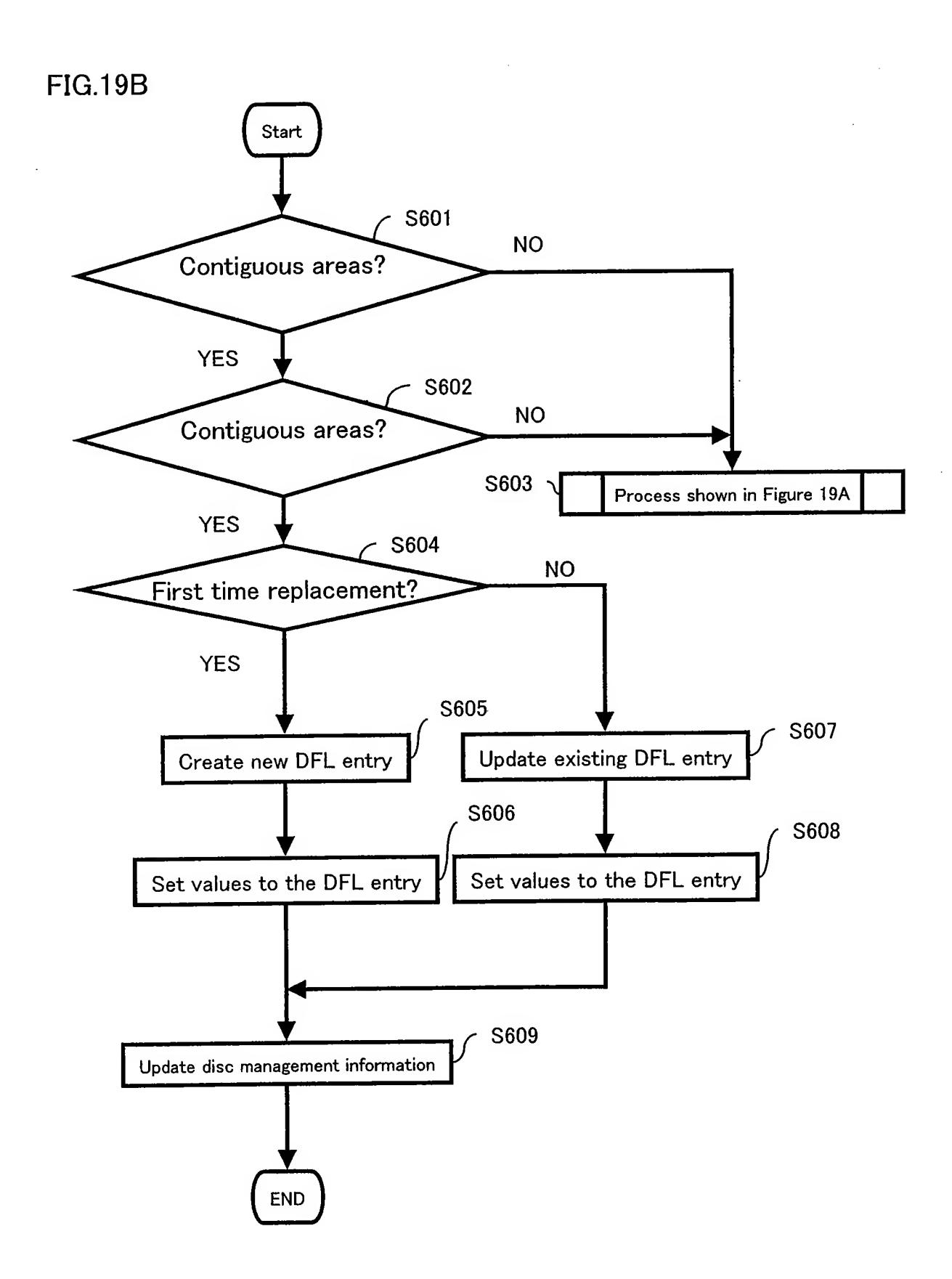


FIG. 20A

	PSN	Data			
				LSN	Data
	1000-1131	AO	++	0-31	AO
LRA	1132-1163	(Unrecorded)		32-63	(Unrecorded)
	1164-1195	(Unrecorded)		64-95	(Unrecorded)
	1196-1227	(Unrecorded)		96-127	(Unrecorded)
	1228-1259	(Unrecorded)		128-159	(Unrecorded)
	1260-1291	(Unrecorded)		160-191	(Unrecorded)
	1292-1323	(Unrecorded)		192-223	(Unrecorded)
User data	1324-1355	(Unrecorded)		224-255	(Unrecorded)
↑ area 108	•••			• • •	• • •
√ Outer spare	x10-y10	1 1 1			
area 107					

FIG. 20B

Header information 1001

FIG. 21A

	PSN	Data]		
	w w =			LSN	Data
	1000-1131	AO	4	0-31	A1
L,	1132-1163	A1		32-63	(Unrecorded)
LRA	1164-1195	(Unrecorded)		64-95	(Unrecorded)
LICH	1196-1227	(Unrecorded)		96-127	(Unrecorded)
	1228-1259	(Unrecorded)		128-159	(Unrecorded)
	1260-1291	(Unrecorded)		160-191	(Unrecorded)
	1292-1323	(Unrecorded)		192-223	(Unrecorded)
User data	1324-1355	(Unrecorded)		224-255	(Unrecorded)
↑ area 108					
V Outer spare	x10-y10				
area 107					

FIG. 21B

Header	informatio	n 1001		
0000	1000	0000	1132	2100A

FIG. 22A

	PSN	Data			
	• • •		g	LSN	Data
	1000-1131	A0	←- +	0-31	A2
	1132-1163	A1		32-63	(Unrecorded)
	1164-1195	A2		64-95	(Unrecorded)
	1196-1227	(Unrecorded)		96-127	(Unrecorded)
LRA	1228-1259	(Unrecorded)		128-159	(Unrecorded)
	1260-1291	(Unrecorded)		160-191	(Unrecorded)
	1292-1323	(Unrecorded)		192-223	(Unrecorded)
User data	1324-1355	(Unrecorded)	·	224-255	(Unrecorded)
↑ area 108	•••			• • •	
√ Outer spare	x10-y10				
area 107	• • •				

FIG. 22B

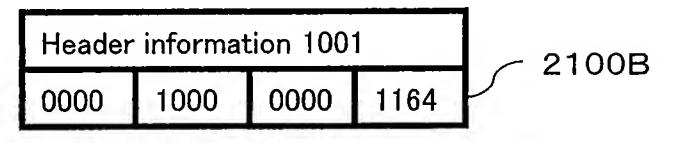


FIG. 23A

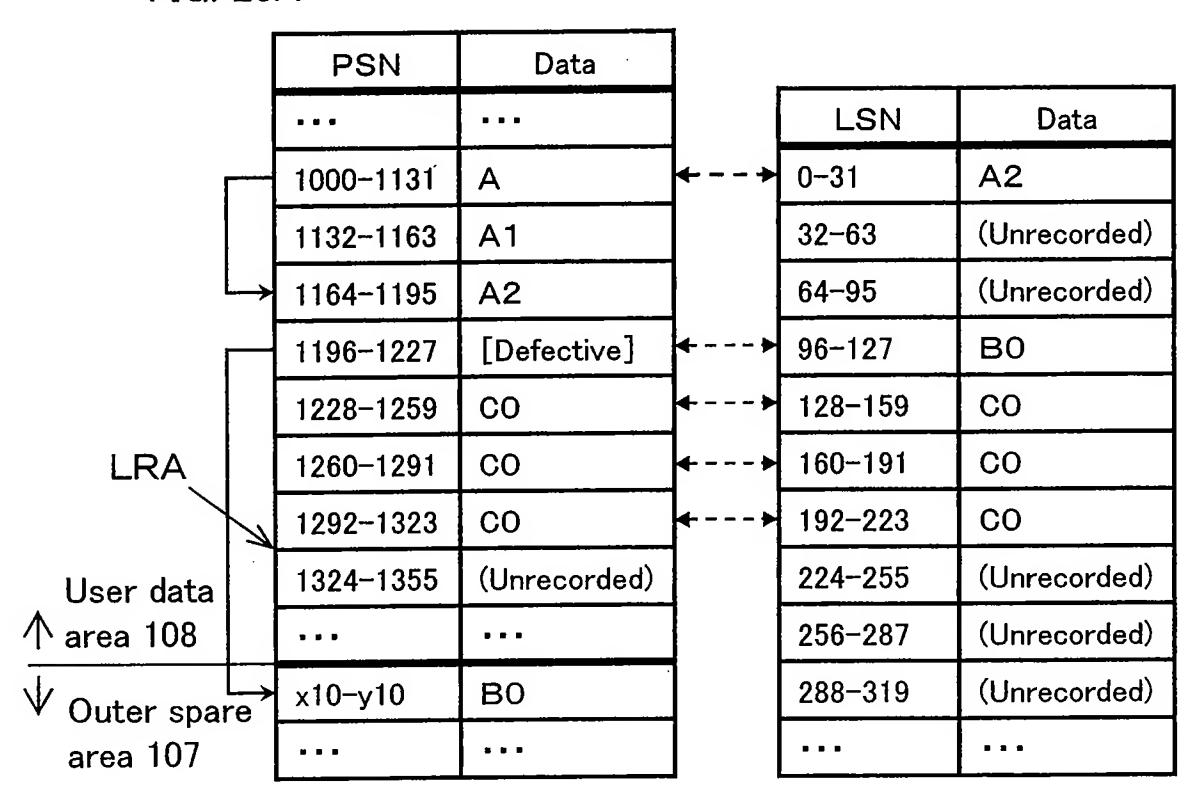


FIG. 23B

Header	informa	tion 1001	1
0000	1000	0000	1164
0000	1196	0000	x10

FIG. 24A

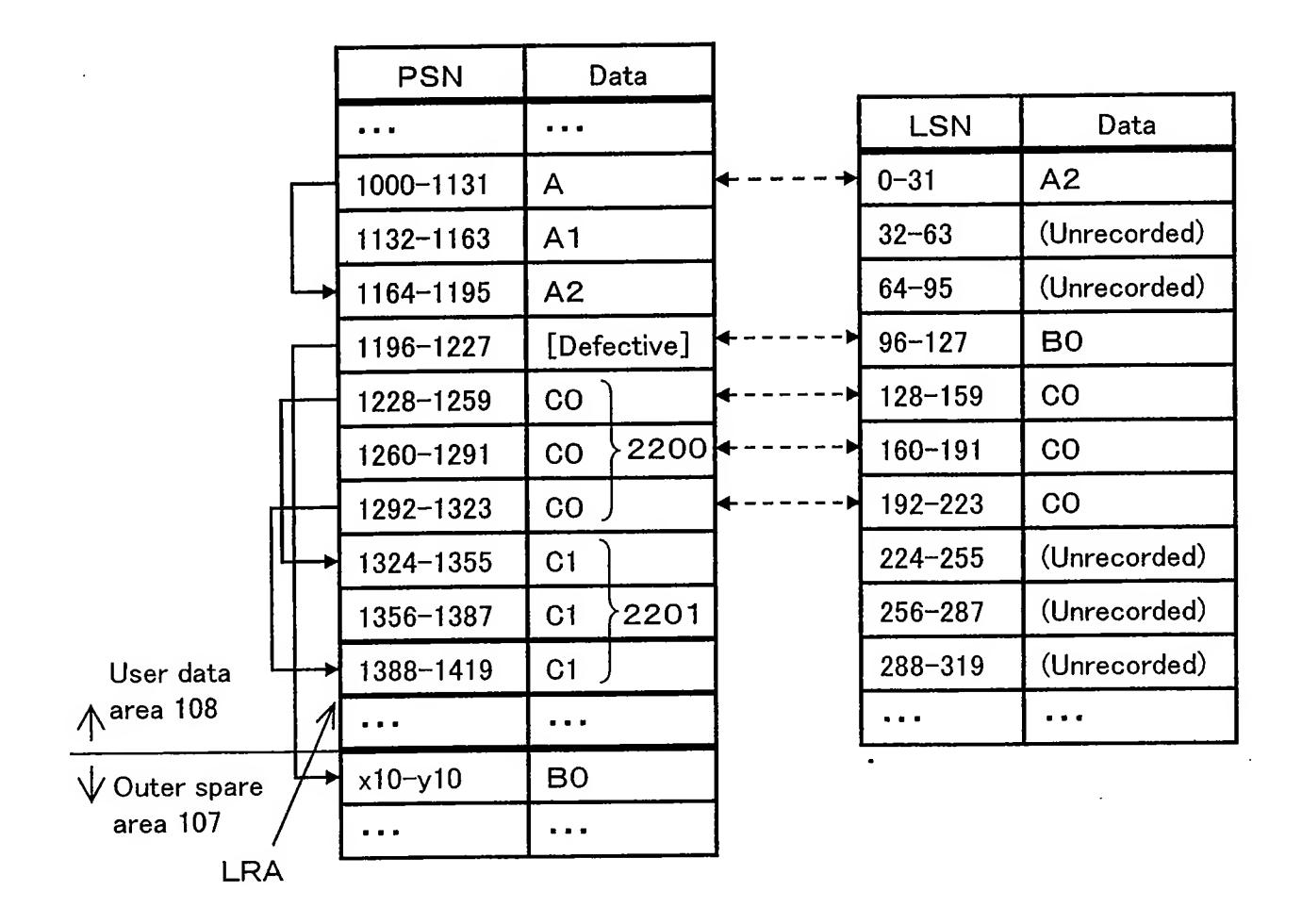


FIG. 24B

Header				
0000	1000	0000	1164	2100B
0000	1196	0000	x10	~ 2101A
0000	1228	0001	1324	2102A
0000	1292	0010	1388	2103A

FIG. 25

3210

Session start information 211

Track start location information 212

Last recorded address information within track (LRA) 213

Last recorded logical address information within track 3214

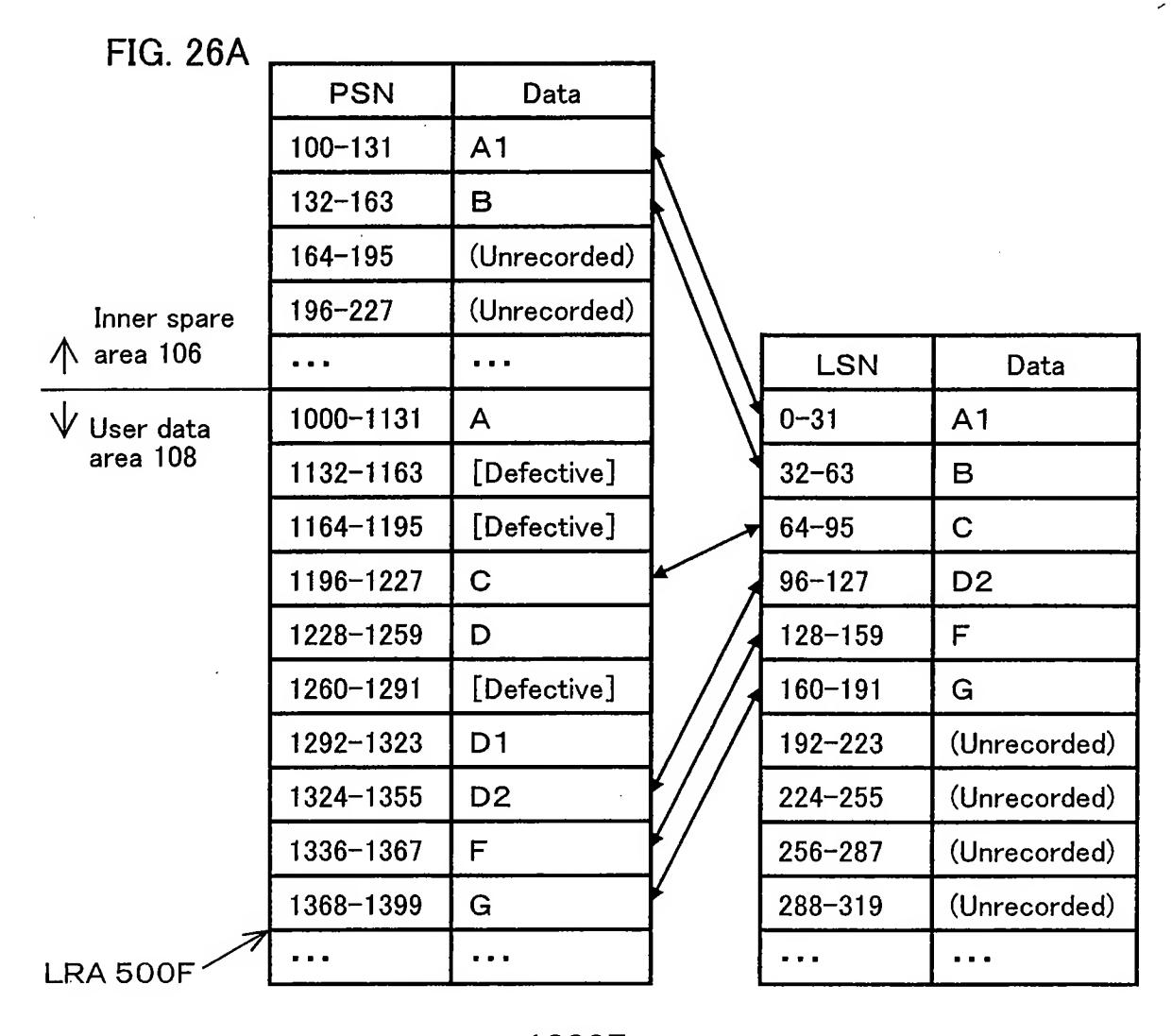


FIG. 26E	3			1000)F	_
	Status information			Original location	Replacement location	<u> </u>
	0	0	00	1000	100	- 522
	0	0	00	1132	132	523
	0	1	00	1164	1196	524
	0	1	00	1196	1324	525
	0	1	00	1228	1336	526
	0	1	00	1260	1368	530
	1	0	00	1132	0	531
	1	0	00	1164	0	532
	1	0	00	1260	0	

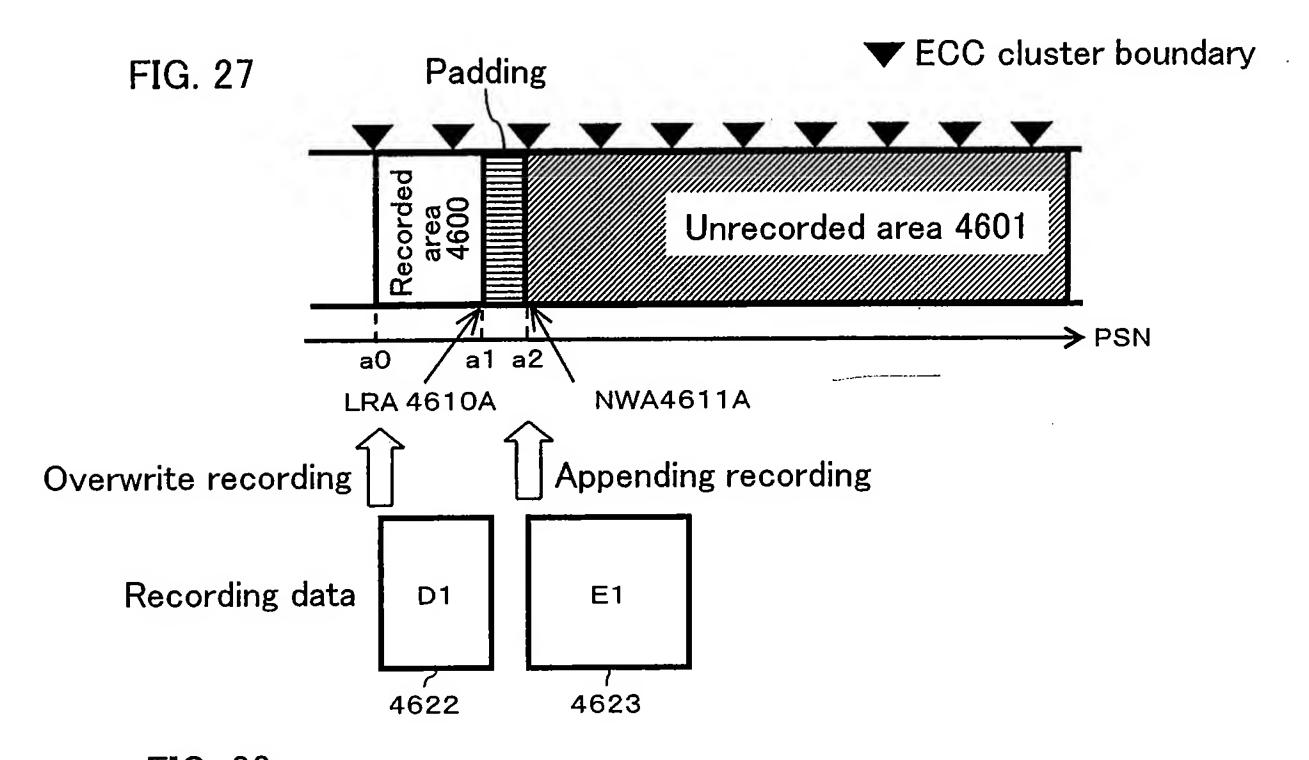
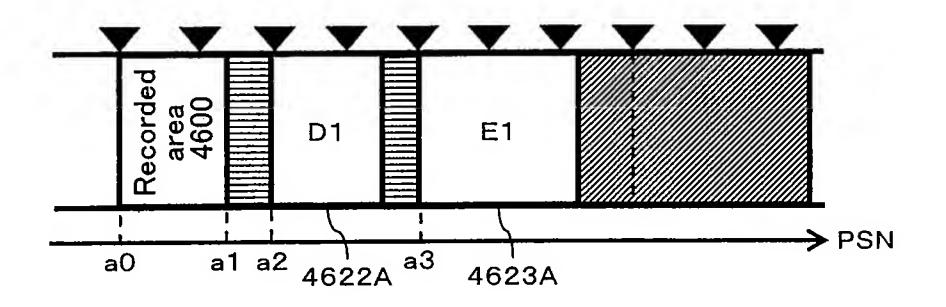
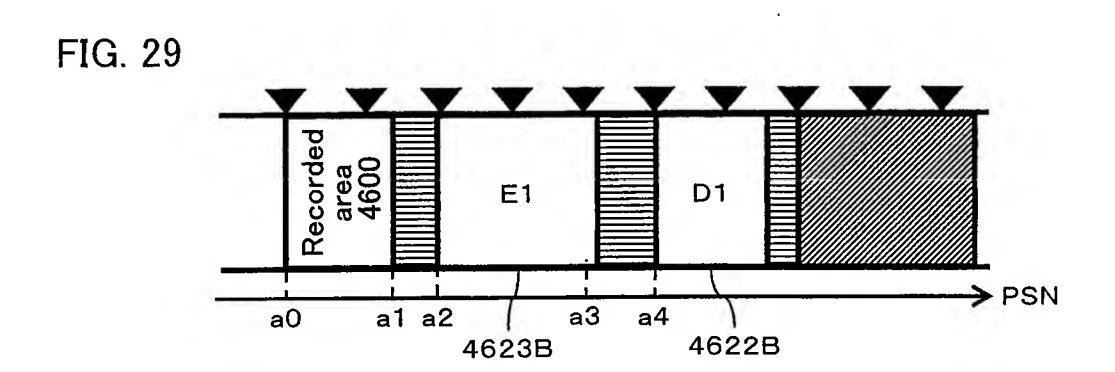


FIG. 28





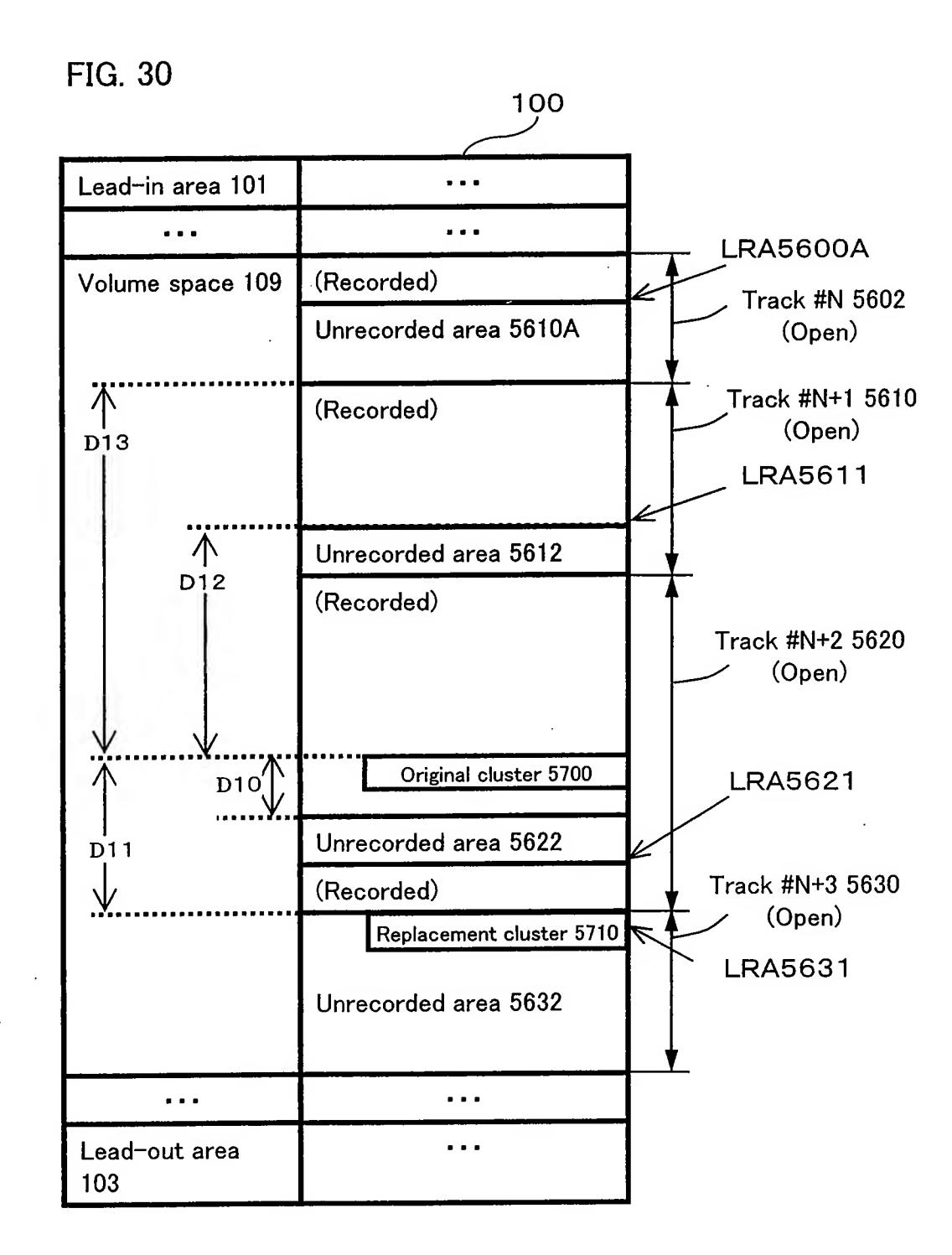


FIG. 31

	•				
Lead-in a	rea	Disc manag	Disc management structure 2		
Spare area			115		
Volume structure area 3					
		FE (Metada	FE (Metadata file) 7a		
			FSD12		
			FE(ROOT)13		
			FE(Dir-A)		
	Metadata partition 5a	Metadata file 6a	FE(Dir-B)		
	par dicion ou	.,,,	FE(File-a)		
Valuma a			FE(File-b)		
Volume space 2			Unrecorded area 11a		
		FE (Metada	FE (Metadata mirror file) 7b		
	Metadata partition 5b	Metadata mirror	(Duplication of Metadata file 440)		
		file 6b	Unrecorded area 11b		
		Data file (F	Data file (File-a) 8		
	Physical partition 4	Data file (F	Data file (File-b) 9		
		Unrecorde	Unrecorded area 11c		
	Volume structure area 3b				

FIG. 32

1 IG. 52					
Lead-in area					
		Disc management structure 2			
L					
Spare area 17					
		FE(ROOT)16			
Volume structure area 3		• • •			
			FE (Metadata file) 7a		
			Metadata file 6a	FSD12	
		Metadata partition 5a		FE(ROOT)13	
				FE(Dir-A)	
				FE(Dir-B)	
				FE(File-a)	
				FE(File-b)	
Volume				FE(File-c)14	
space 2	ļ			Unrecorded area 11a	
			FE (Metadata	a mirror file) 7b	
		Metadata	Metadata mirror file 6b	(Duplication of Metadata file 440)	
		partition 5b		Unrecorded area 11b	
			Data file (File-a) 8		
	Pł	nysical partition	Data file (File-b) 9		
	42		Data file (File-c) 15		
			Unrecorded area 11c		
		olume structure ea 3b			

FIG. 33A

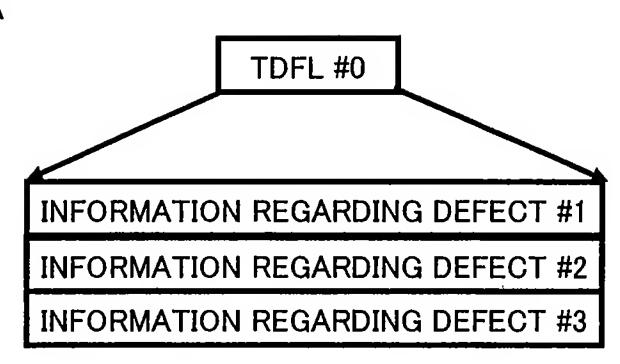
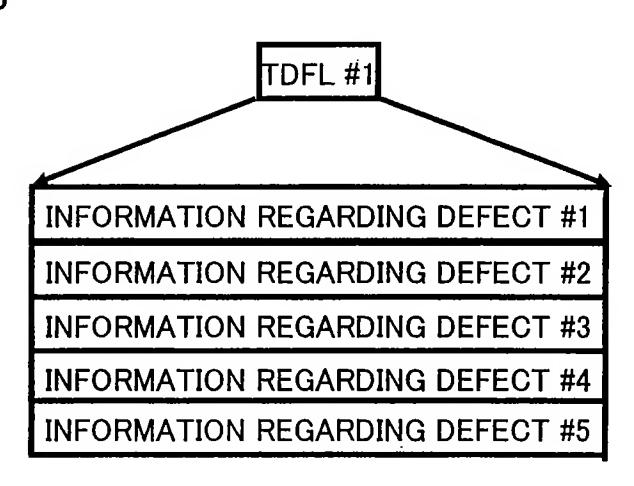


FIG. 33B



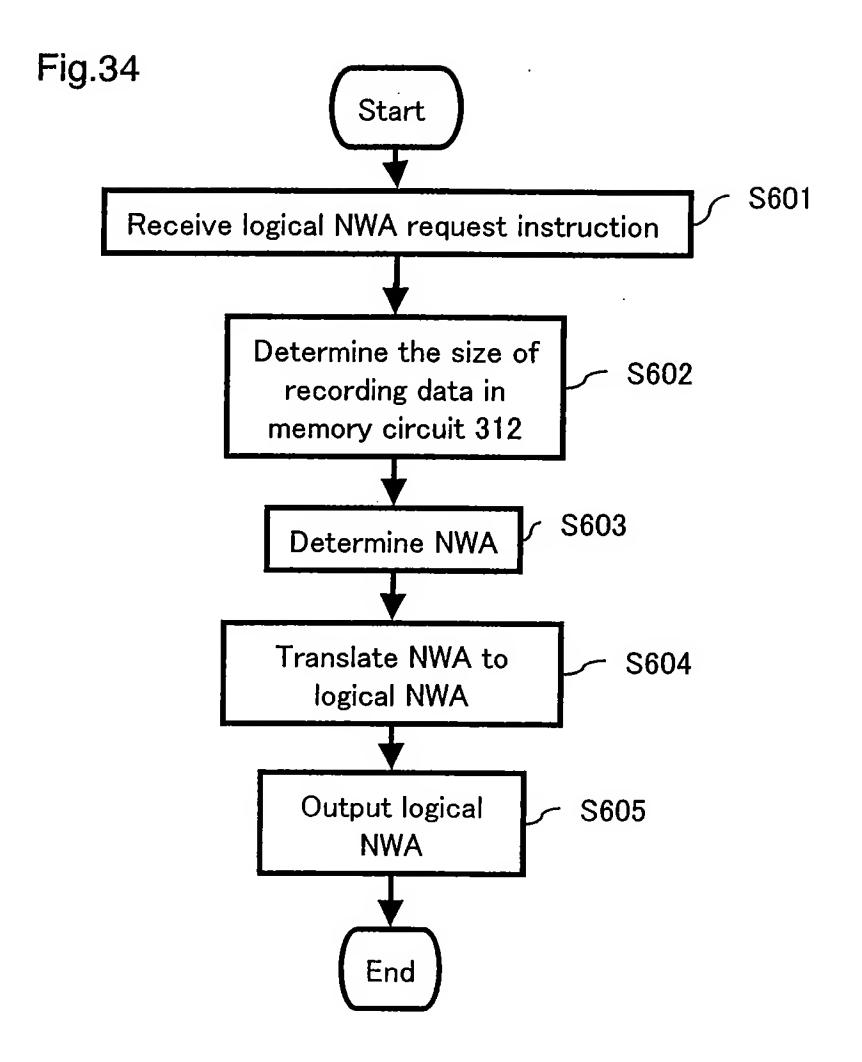
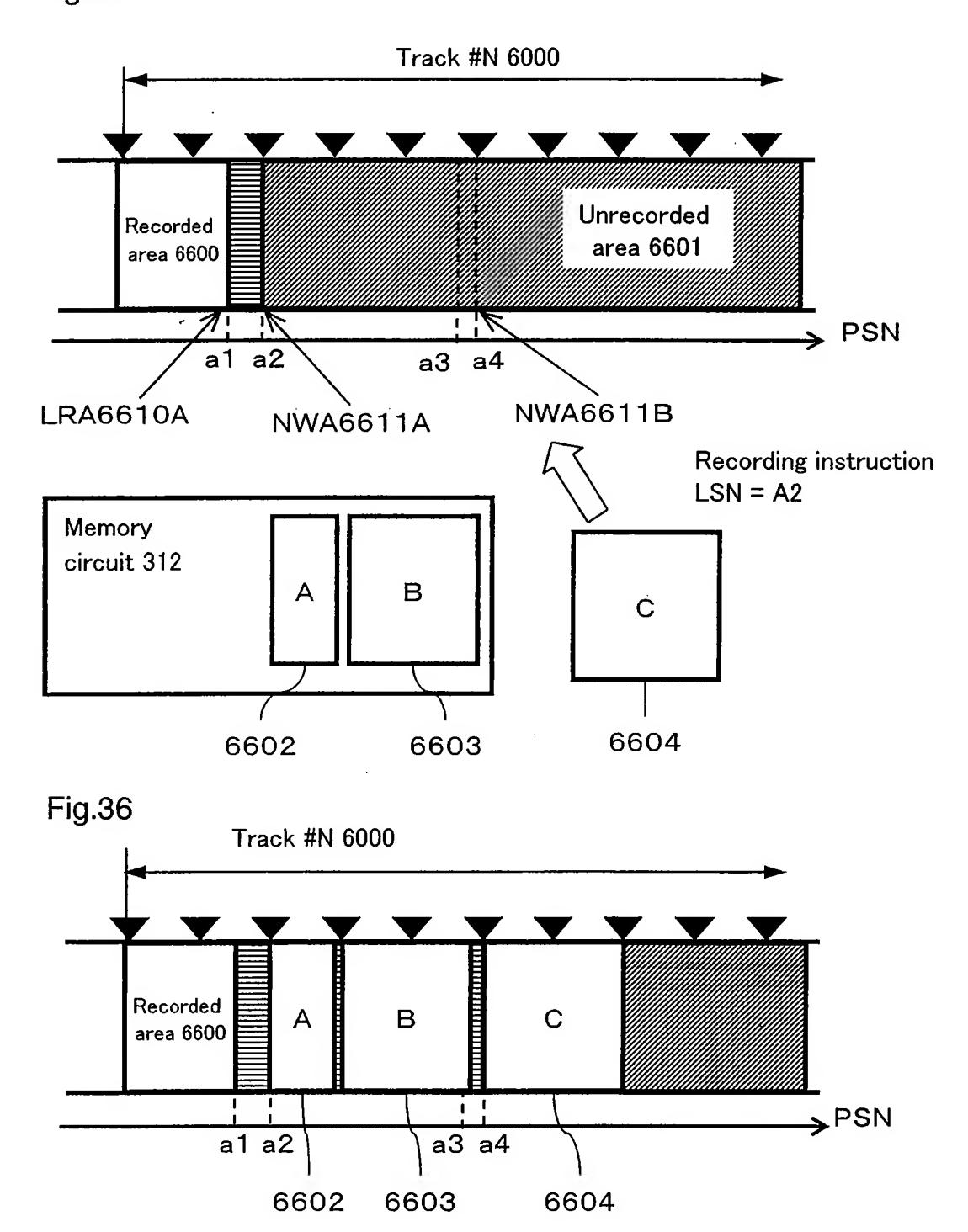
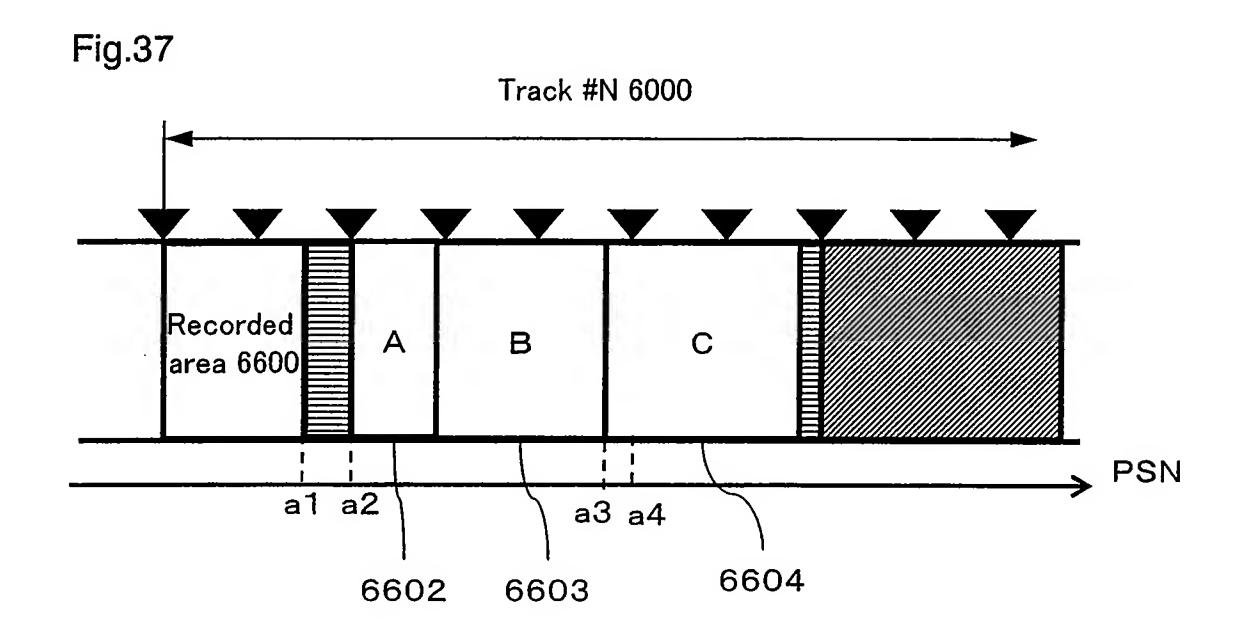
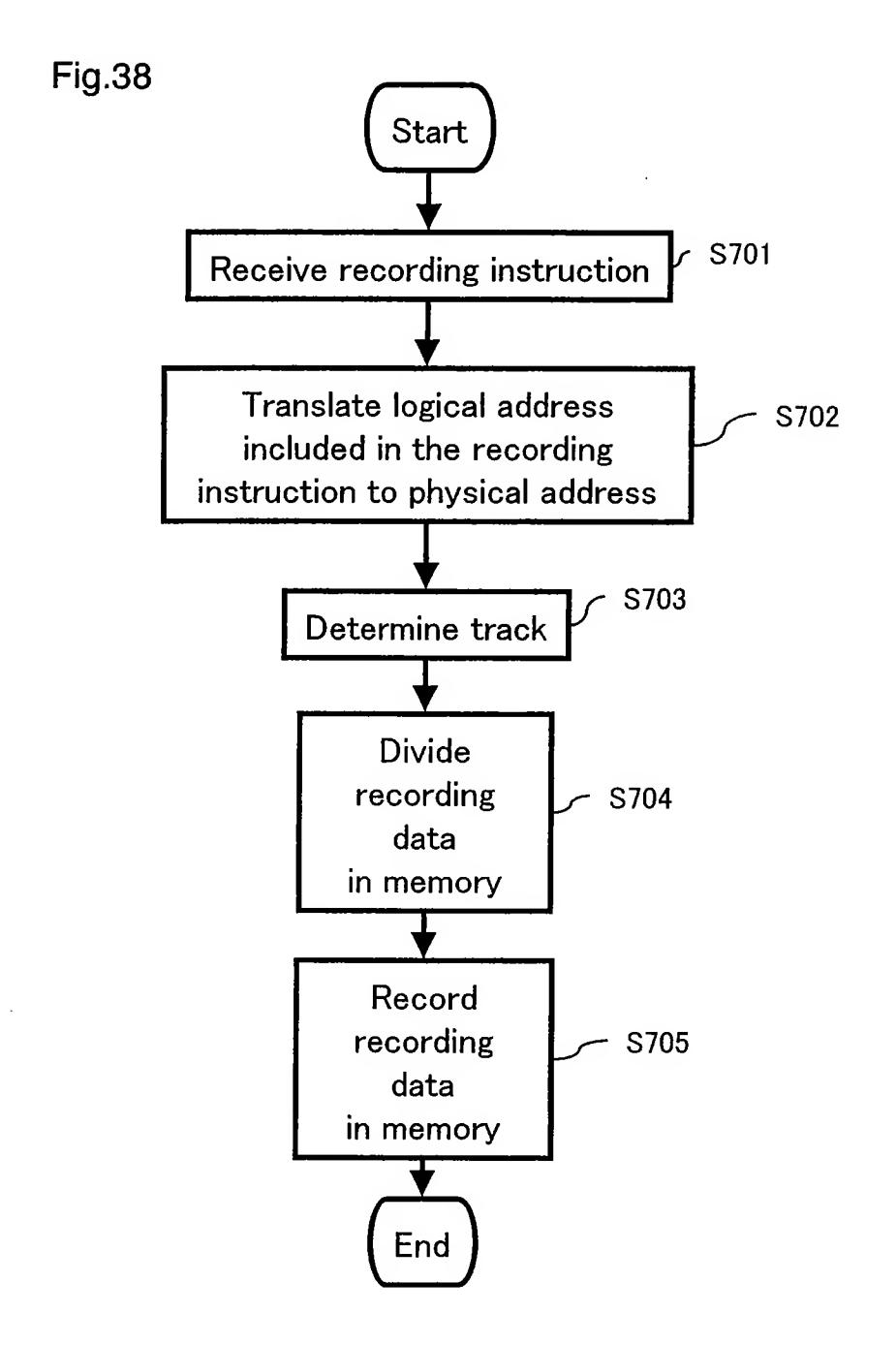
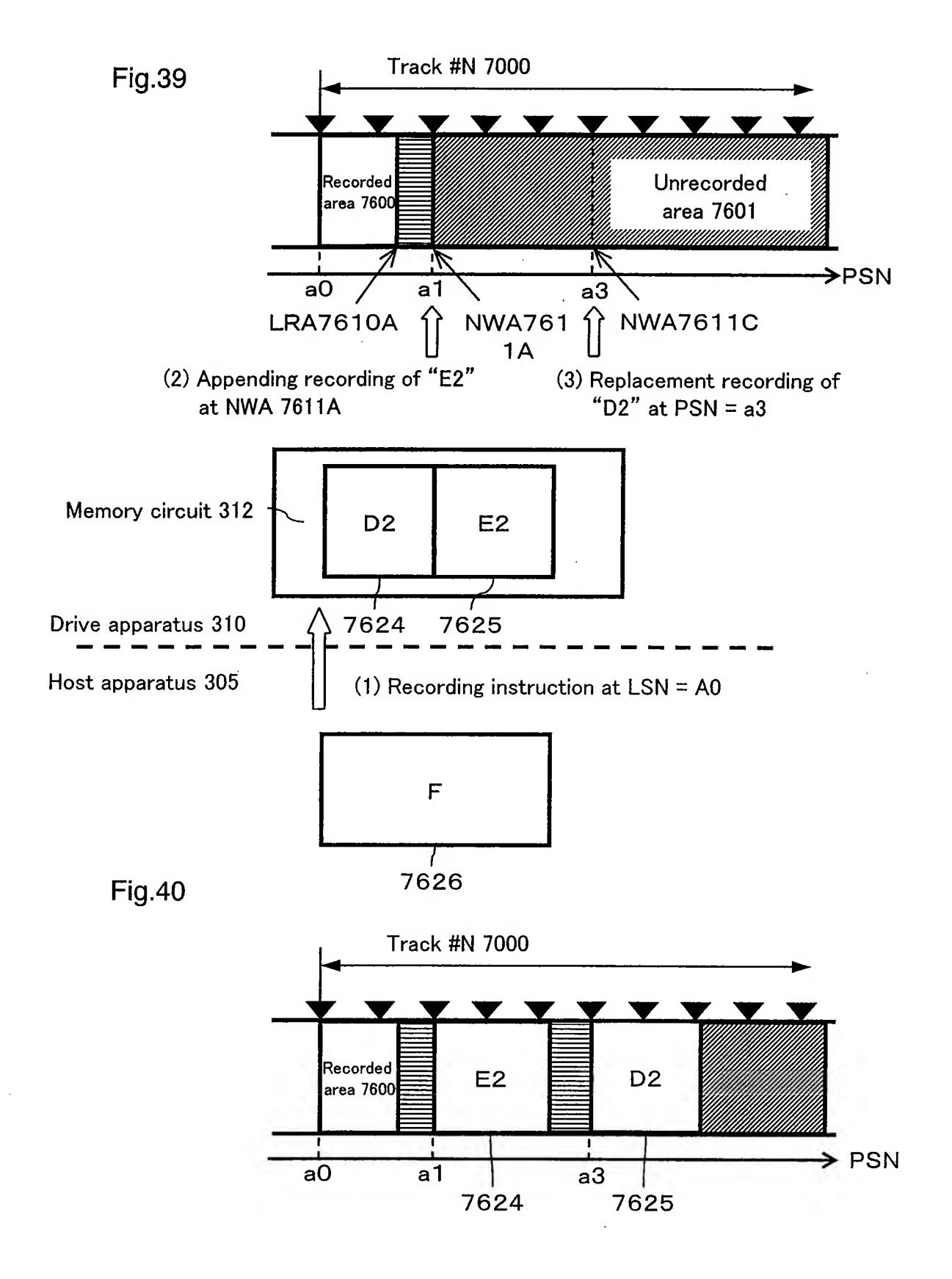


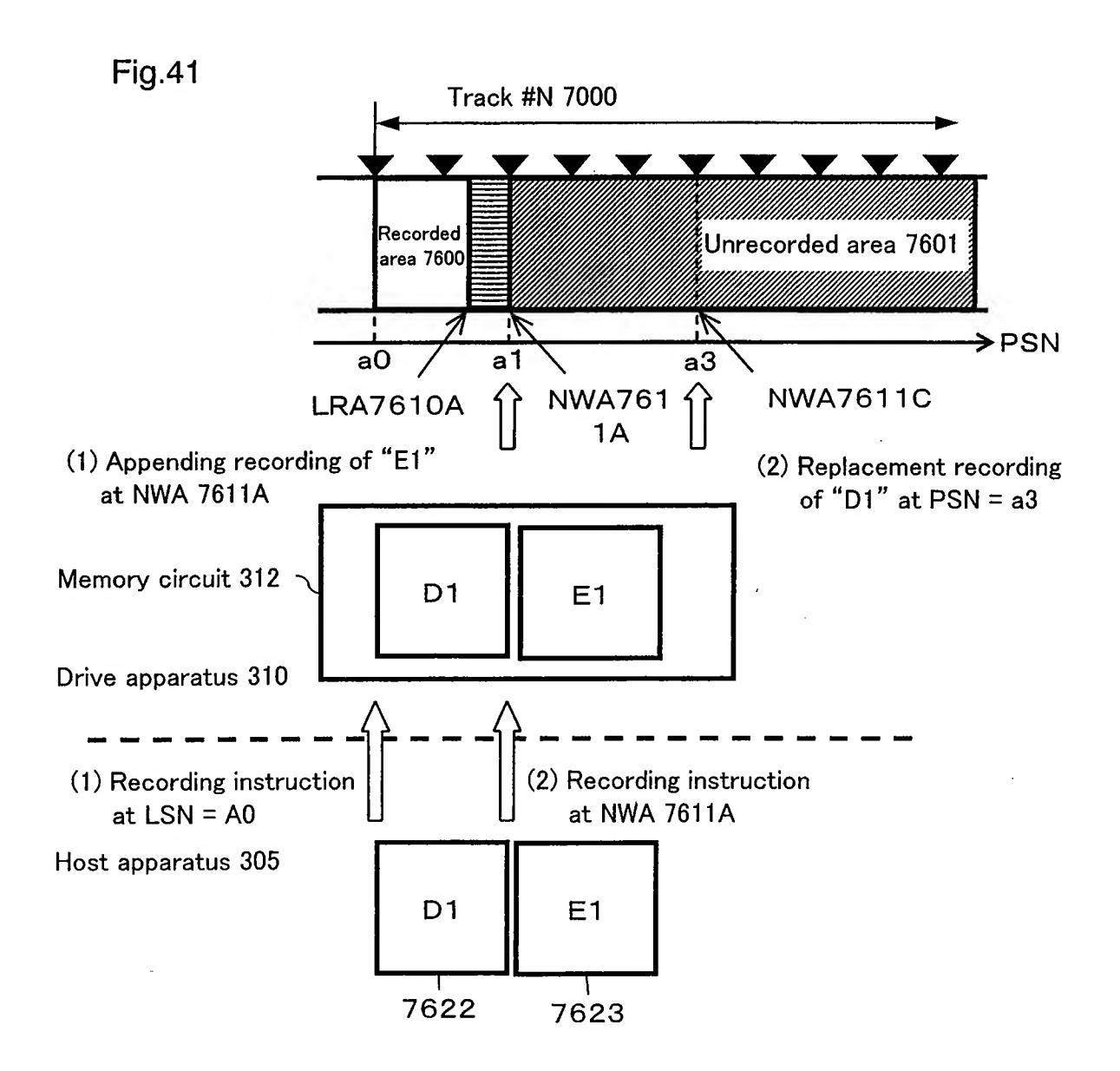
Fig.35











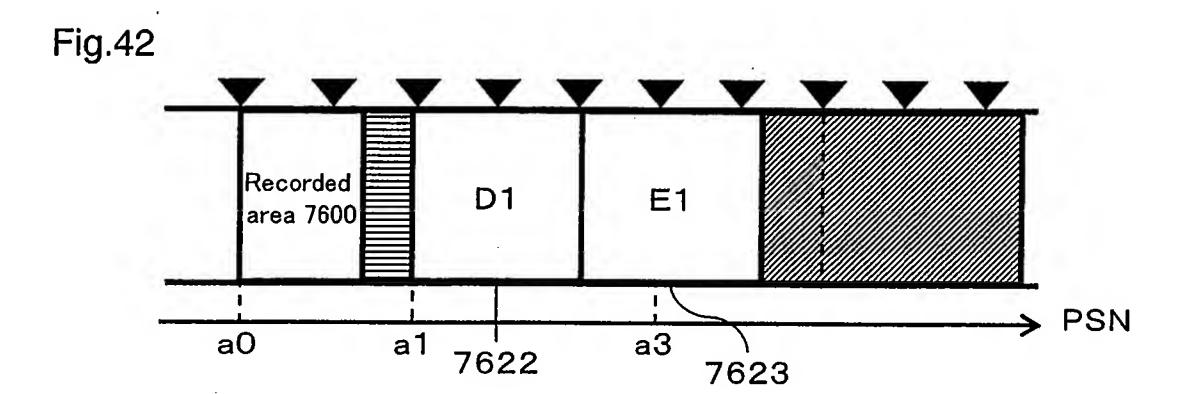


Fig.43

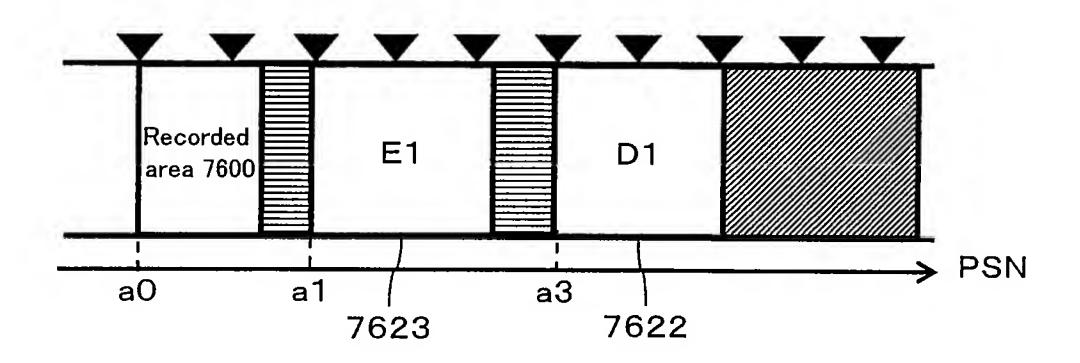
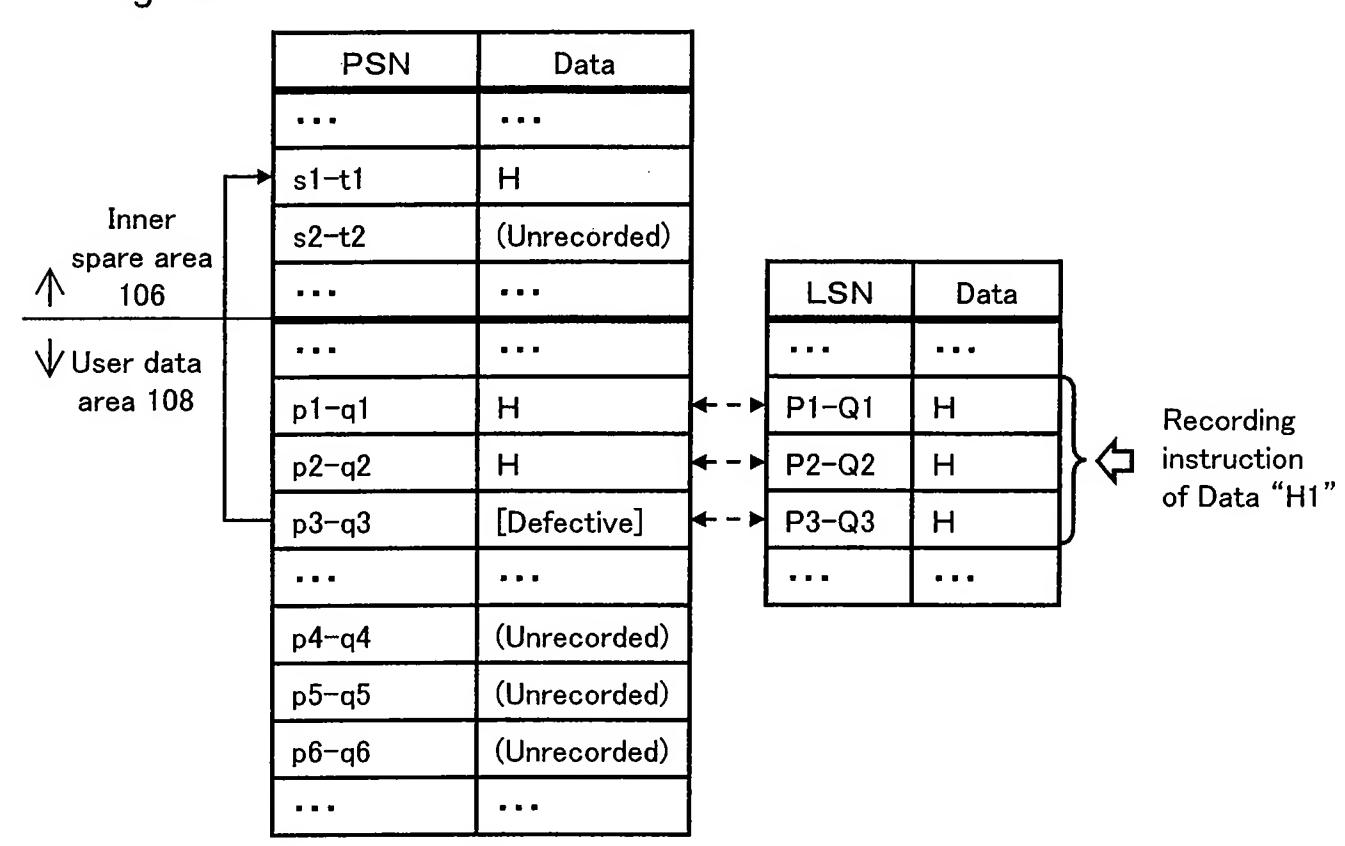


Fig.44A



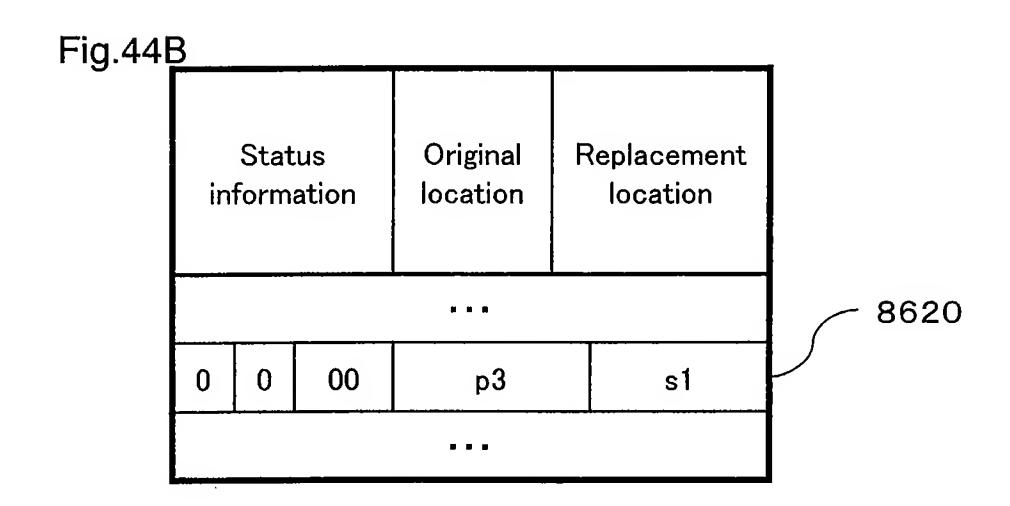


Fig.45A

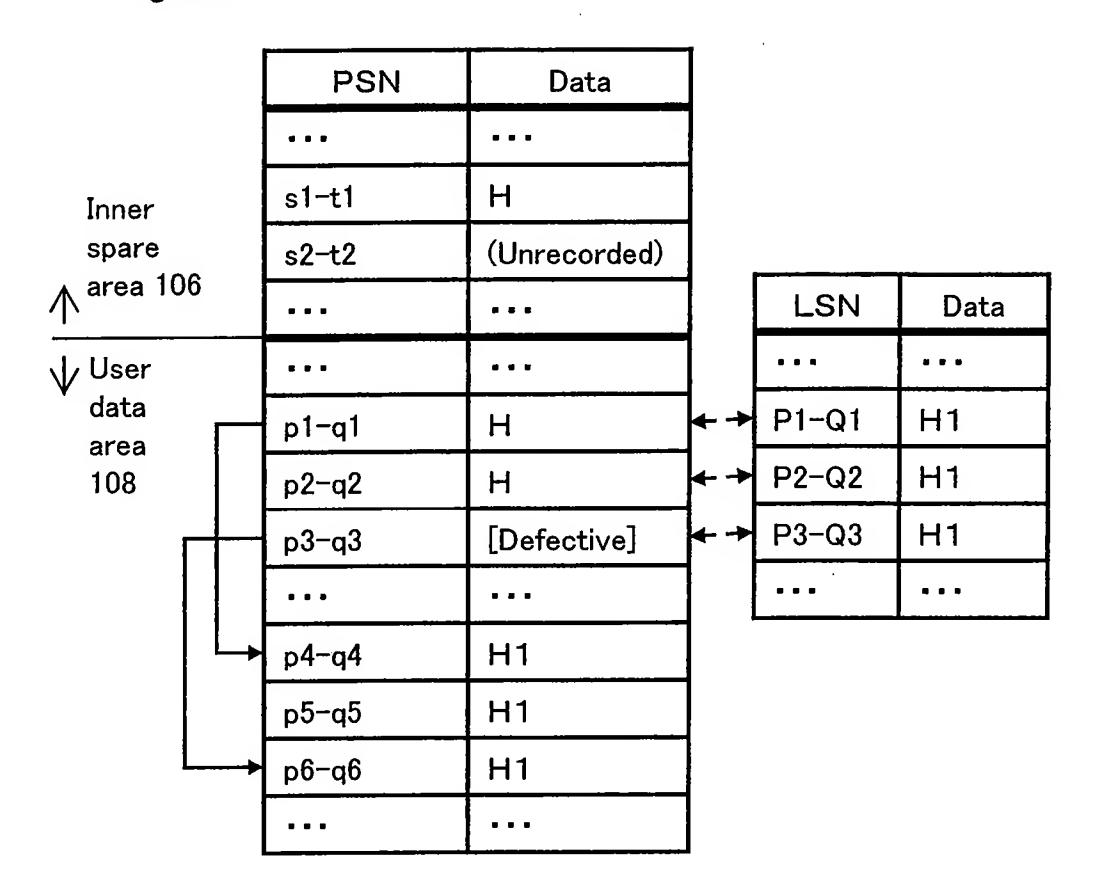


Fig.45B

in	Stat form	us ation	Original location	Replacement location	
0	1	01	р1	p4	86
0	1	10	рЗ	- p6	86

Fig.46A

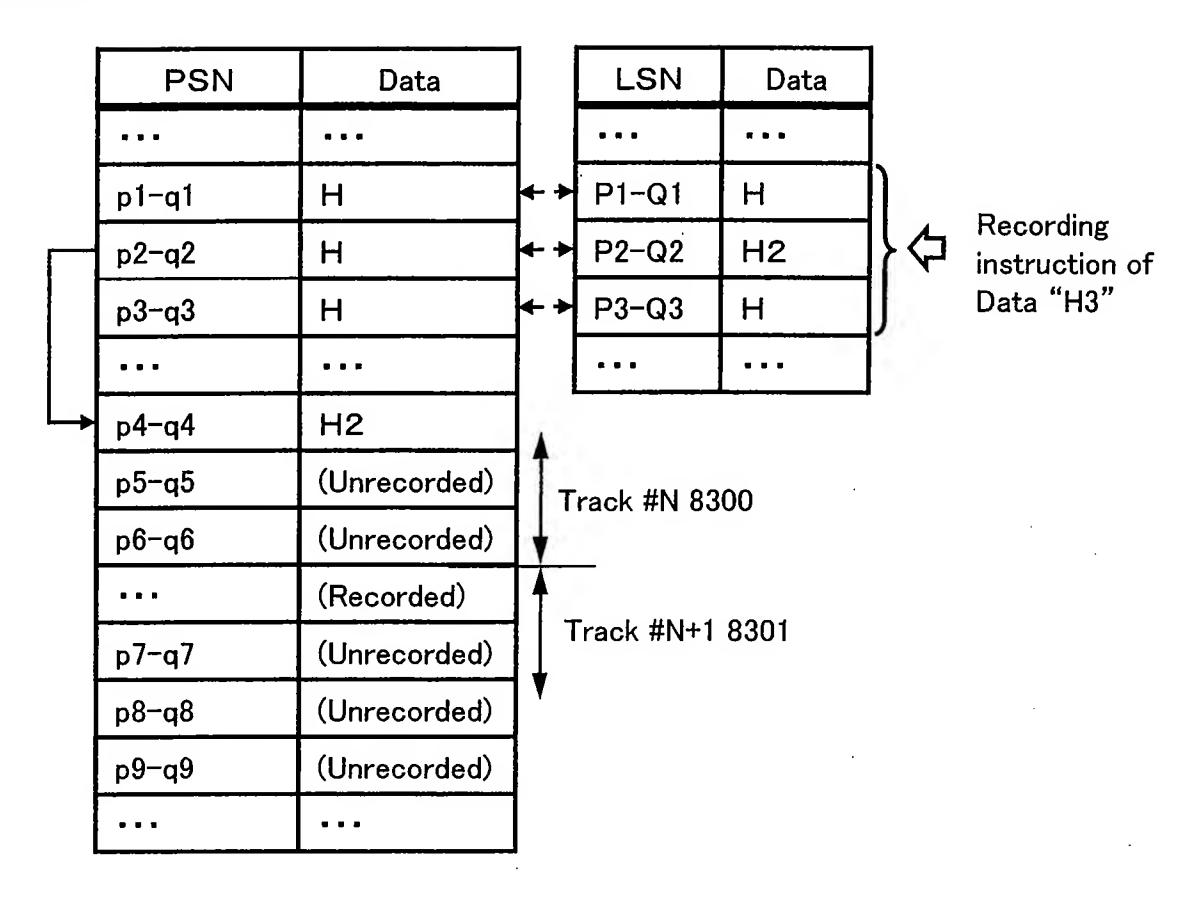


Fig.46B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	8302
0000	p2	0000	p4	ľ

Fig.47A

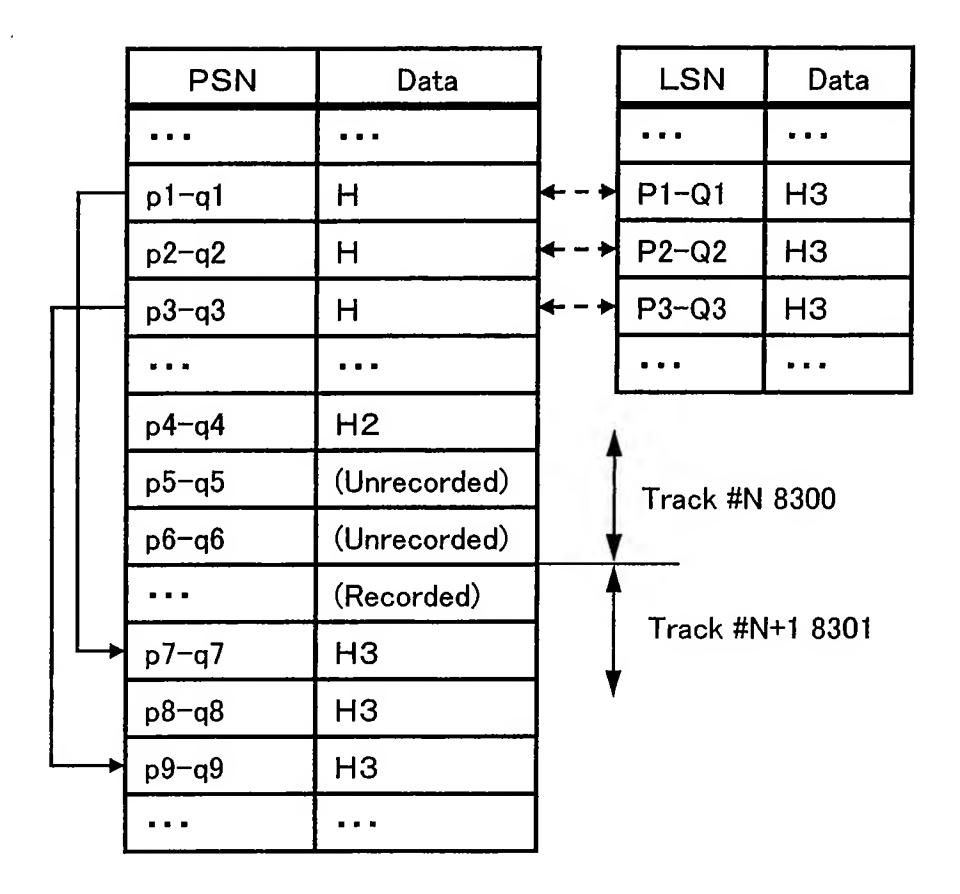


Fig.47B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	
0000	p1	0001	p7	/ 8401
0000	рЗ	0010	p9	7

FIG.48

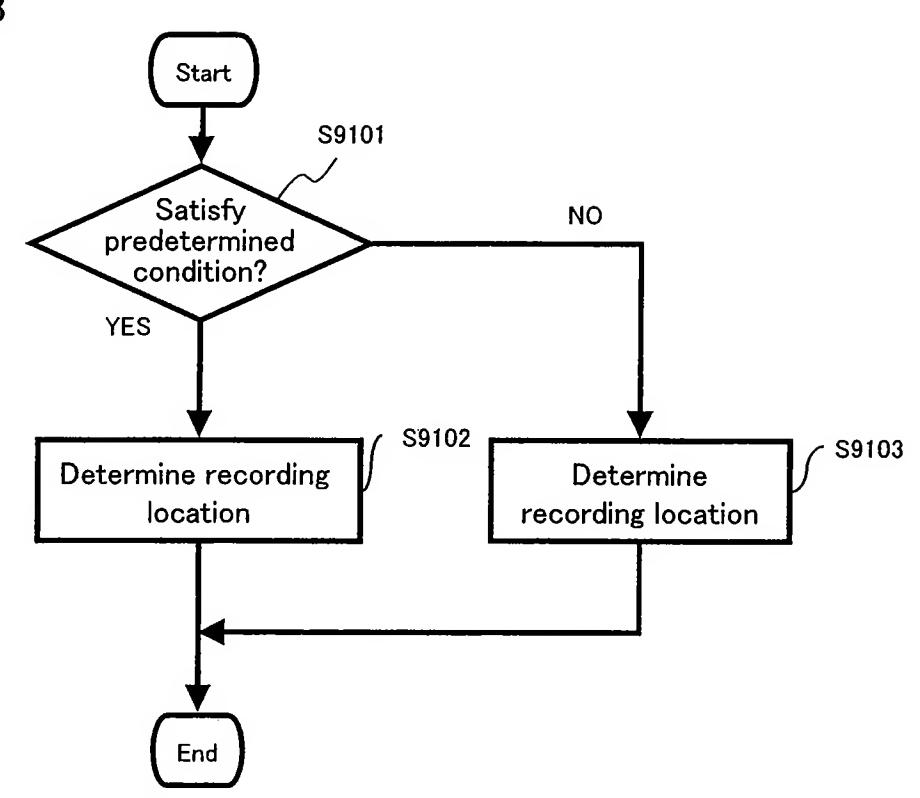


FIG.49A

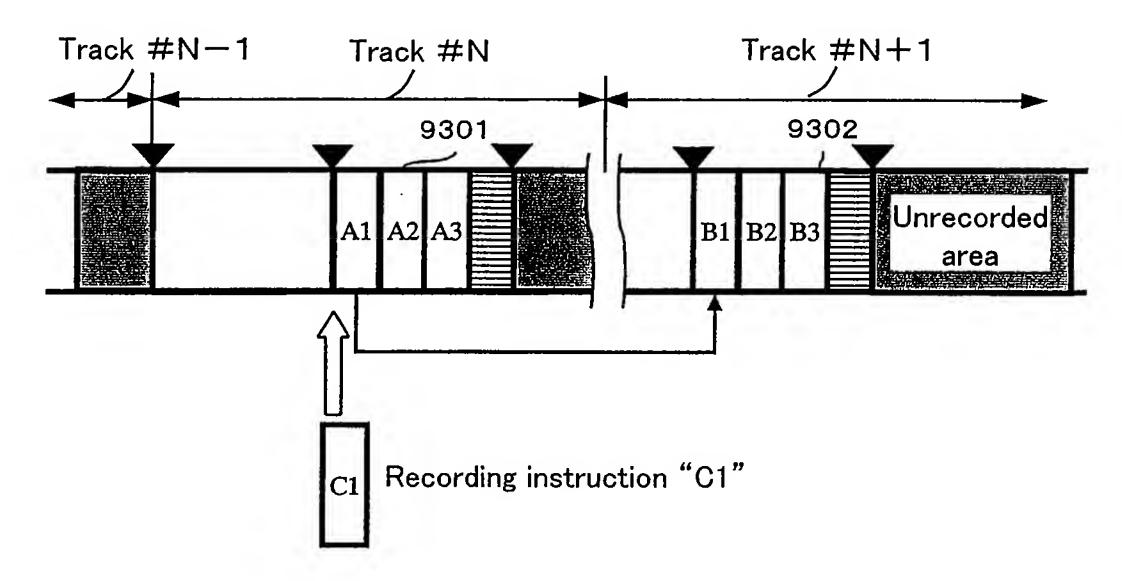


FIG.49B

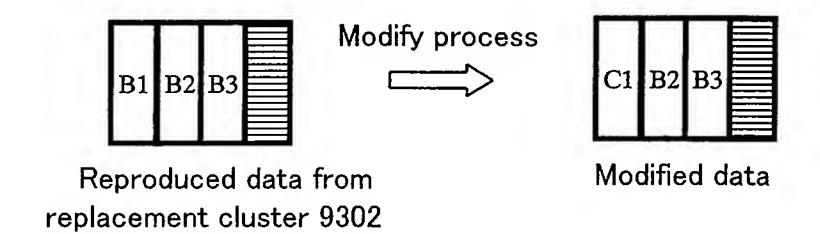


FIG.49C

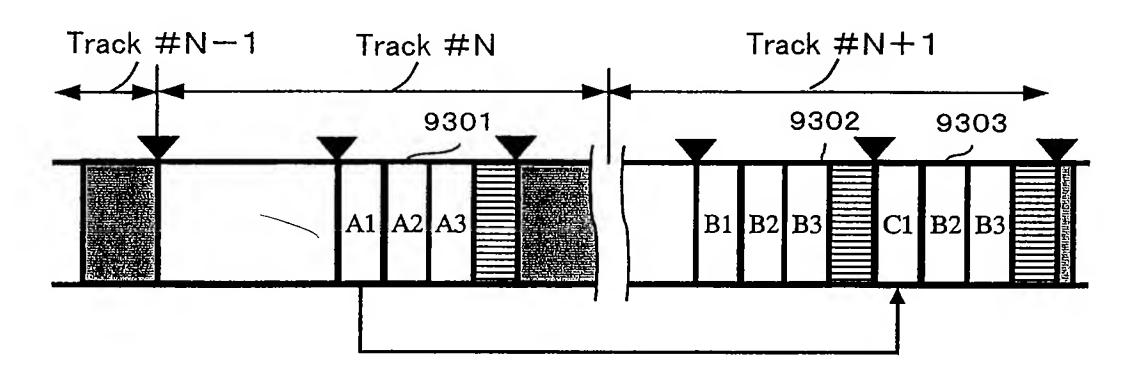


Fig.50

Status information			Original location	Replacement location				
		·	• • •					
0	0	00	1132	132	— 9800			
0	1	00	1164	1196	9801			
	* • •							

Fig.51

in	Stat form	tus ation	Original location	Replacement location					
0	0	00 1132	132	y 9800					
0	1	00	1164	1196	9801				
0	1	00	1228	1260	981				
			n u =						

Fig.52A

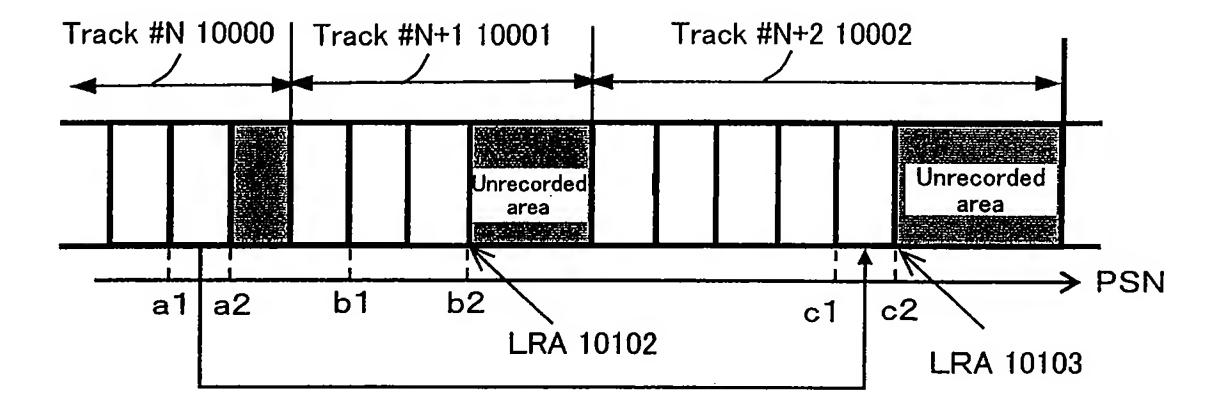


Fig.52B

Stat	tus infor	mation 1	011	Original	Replacement	
Flag1	Flag2	Flag3	Flag4	location information 1012	location information 1013	<u> </u>
	_			a1	c1	

Fig.53B

Sta Flag1	tus infor Flag2	mation 1 Flag3	011 Flag4	Original location information 1012	Replacement location information 1013	10800
	_	_		a1	c1	
	•	• •		a2	c2	1080